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THE EFFECT OF THE INTERVIEWER'S PRESENTATION ON SOME SCHIZOPHRENIC SYMPTOMATOLOGY

by

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Duke University

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Dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor
of Philosophy in the Department of
Psychology in the Graduate School
of Duke University

1975

ABSTRACT

(Psychology-Clinical)

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ABSTRACT

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Shimkunas (1972) found that pathological verbalizations among schizophrenics were related to a demand for personal self-disclosure. A reconsideration of these findings was suggested in light of impression management theory. A procedure was developed to permit an assessment of the impact of a broader goal in which subjects could experience some personal investment. This was accomplished by varying a demand for personal self-disclosure with the presence or absence of a broader goal. The design permitted a replication of the earlier Shimkunas work as a portion of the current study. Remaining on an Open Ward and readiness for Discharge were postulated as positive and negative goals, respectively, and were derived from previous impression management studies among psychiatric inpatients.

The study utilized three diagnostic groups (paranoid schizophrenics, nonparanoid schizophrenics, and nonpsychotics), four Goal-Demand

conditions (Personal Demand-No Goal, Personal Demand-Open Ward, Personal Demand-Discharge, and Impersonal Demand-No Goal), and eight topics (Depending on People, Getting Angry at People, Helping Other People, Love, Being Good at Things, Being Rejected by People, Feeling Guilty, and The Future). The topics and diagnostic groups were identical to those in the Shimkunas study. Comparable methodology was maintained to the fullest possible extent to facilitate an adequate comparison with the earlier study. Dependent measures were 7-point rating scales on five dimensions: Personal Disclosure, Avoidance, Suspiciousness, Delusional Thinking, and Autism. Subjects' remarks were tape-recorded during an interview. All subjects were psychiatric inpatients from the same facility.

The grand hypothesis was: Schizophrenic behavior, as measured by psychopathological verbalizations in an interpersonal, "clinical" situation, can be modified in the context of greater personal investment in the interpersonal situation. The grand hypothesis was operationally divided into three components: (1a) Schizophrenics confronted by a demand for personal self-disclosure in the context either of no broader goal or a negative goal (Discharge) will demonstrate more verbal psychopathology than nonpsychotics in the same situation. (1b) Schizophrenics confronted by either a demand for impersonal self-disclosure or a demand for personal self-disclosure linked to a positive goal (remaining on an Open Ward) will not differ significantly from nonpsychotics in the same

situation. (2) Schizophrenics confronted by a demand for personal self-disclosure linked to a positive goal (remaining on an Open Ward) will demonstrate less verbal psychopathology than schizophrenics confronted by a demand for personal self-disclosure in the absence of a broader goal. (3) Schizophrenics confronted by a demand for personal self-disclosure linked to a negative goal (Discharge) will demonstrate more verbal psychopathology than schizophrenics confronted by a demand for personal self-disclosure in the absence of a broader goal.

The data yielded considerable support for the grand hypothesis. Hypothesis 1 was strongly supported, and Hypothesis 2 received moderate support. Hypothesis 3, however, failed to be supported. Open Ward emerged as a viable positive goal, while Discharge was not an effective negative goal. Taken as a whole, the data actually indicated Discharge also to be serving to some extent as a positive goal. The results were discussed according to the major hypotheses, dependent measures, diagnoses, goal-demand conditions, and topics. Explanations were advanced to assess the anomalous Discharge results. The unexpected topic effects on Avoidance and Delusional Thinking were also considered. The major conclusions of this study were summarized and their theoretical and therapeutic implications explored.

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CHAPTER I

INTRODUCTION

General Comments

An important development in the area of schizophrenia research has been the appearance of studies related to the social meaning of the aberrant behavior engaged in by individuals with a diagnosis of schizophrenia in inpatient mental health facilities. This movement has merit for several reasons. One, while schizophrenia research operating from other traditions, namely, biochemical, cognitive, and most dramatically, the genetic area, have offered new evidence for the role of these varied influences on the etiology of schizophrenia, in the end the ultimate product is a psychosocial one. Despite the volumes of accumulated contradictory research, no tradition can lay valid claim to all the truth or to a single etiological agent. Thus, at the present time, an objective and modest viewer surveying all the available literature could make a respectable argument based on the assumption that both the genetic and psychosocial factors are necessary components, but that each in itself is insufficient to produce a process that a mental health professional could, with justification, ultimately label "schizophrenia." This view

is espoused in a recent review by Arieti (1974).

As Arieti noted, an hereditary or genetic factor appears to be operating in the etiology of at least some of the persons who have been diagnosed as schizophrenic. Even here the results are puzzling and lacking a consistent quality. The risk of schizophrenia for the general population has been established as .085%. Zerbin-Rudin (1973) cites 15 studies undertaken in seven countries between 1928 and 1969 focusing on the prevalence of schizophrenia among twins. For monozygotic twins the concordance rate ranged from 0 to 85.8%. Of the 10 studies undertaken between 1960 and 1969, when, however tentatively, we may assume the presence of more reliable research methodology, the rate ranges from 0 to 60.0% with the modal range being 25-35%. For dyzygotic twins the findings were 2.1 to 16.7% for the entire period and 4.0-16.7% for 1960-69. While all these figures indicate a prevalence well beyond that of the risk for the population at large, they cannot be explained by a currently known or readily observable law of genetics. Similarly, while the presence of schizophrenia in an individual's hereditary background appears to increase that person's statistical risk for schizophrenia, it fails to explain its development adequately. It is also important to ask, based on the most recent studies, what of the 65-75% of monozygotic twins who do not become schizophrenic? It may well be that there is as much to be learned from these individuals as from their unfortunate co-twins, both from a genetic and a psychosocial perspective.

The purpose of this brief excursion into the genetic influence on schizophrenia is to establish clearly two important reasons for, and some limitations on, the current study. One, as Arieti (1974) stated, even while allowing for a genetic component as providing a potentiality for schizophrenia, other factors are apparently necessary to change the potentiality into a clinical entity. Two, it is the socially shared, verbal or nonverbal behavior of schizophrenics which results in a diagnostic label. Consequently, knowledge of the situational or contextual factor can stimulate and refine theories examining the potential social significance of bizarre behavior for individuals who come to be labeled schizophrenic. Three, precisely because recent developments strongly indicate some genetic component, researchers operating within a psychosocial framework must note the relative limitations on the results they produce. It is to be hoped that those espousing and researching other perspectives will impose the same constraints on their findings. Ultimately, in both the theoretical and empirical realms, there must be collaborative ventures to integrate assumptions and findings into a meaningful whole. For the moment, however, long-term benefit is also likely to be derived from continued systematic exploration of discrete elements of each tradition. While these must bear relationship to a broader theoretical framework, no single set of findings, be they of concordance rates, colorful biochemical agents in any of the human body's fluid systems, eyeblinks, or even the social meaning of a

particular set of behaviors, is likely to produce the answer in the foreseeable future. It certainly cannot be ruled out that what now falls under the single rubric of schizophrenia is actually several distinct processes. The breadth of symptomatology used to justify a schizophrenic diagnosis could conceivably allow for this possibility. Conversely, as Arieti (1974) suggests, schizophrenia as an entity may also be several distinct entities with a common symptomatology. Schizophrenia researchers must embrace a certain humility if their tools are to have real meaning either in the scientific community or in promoting effective responses to the troubled life situations of those of us who come to be called schizophrenic.

This study attempts to explore further the role of the contextual situation on the presence of verbal psychopathology as one measure of aberrant behavior. This method is designed to permit an assessment of the purposefulness of some schizophrenic behavior. The tradition adopted here is in marked contrast to the view that schizophrenics are victims of a process, intrapsychic or genetic-biochemical, over which they have no control, or for which there is no appropriate psychologically or socially oriented response. Instead, people who are diagnosed as schizophrenic are conceived as retaining much of the same potential for exercising direct social influence, which it is within their ability to control actively, as other human beings who are not schizophrenic. At the broadest level, then, this study operates within a psychosocial

framework. Before proceeding with the details of this study, the next two sections of this introductory chapter will consider the relevant research which forms the background for the current study. Finally, the experimental design and hypotheses of the current study will be presented.

Foundations for an Experiment: Impression Management-Purposefulness Research

Theoretical background

The theory of impression management from which in part the concept of the purposefulness of schizophrenic behavior is derived developed from a sociological perspective of everyday human interaction (Goffman, 1959). Goffman's observations and theory stress that an individual's actions in the presence of others are usually accompanied by a reason for mobilizing his activity to convey an impression which it is in that person's interest to convey. Goffman allowed that an individual may give a well-designed impression of a particular kind while being neither consciously nor unconsciously disposed to create such an impression. Similarly, the recipients of an individual's efforts at conveying something may be accurate in their perceptions or they may reach, and act on, conclusions which are unwarranted either by the facts or the individual's intent.

This concept may be applied to both normal and abnormal behavior in serving as an analytic tool with which to screen human interactions.

In the realm of abnormal behavior, it focuses attention on the potential goals of an individual's symptomatology. What is remarkable about Goffman's early work on impression management is the length of time it took to become applied more directly to the field of abnormal psychology. It is essential, therefore, to note Goffman's original sociological contribution before considering the specific psychological work which forms the background for the current research.

Two early studies

The notion that psychiatric inpatients can willingly modify symptomatology is not altogether new, and even precedes Goffman's pioneering endeavor. Grayson and Olinger (1957), for example, examined the simulation of normalcy by inpatients on the MMPI. After a standard administration of this instrument, subjects (N = 45) were then told to do it as a normal person would. The results yielded profiles of which 73% were judged to be improved. What is equally important, however, is that while three-fourths of the sample were judged to be improved, one-fourth either presented essentially the same or worse profiles. Thus, it was established early on that symptomatology under controlled experimental circumstances can be, at least, bi-directional. Approximately half this sample were carrying schizophrenic diagnoses (N = 24). Of these 24, on the second administration 12 maintained a schizophrenic profile, although sometimes softened; nine produced profiles reflecting

another diagnostic category, and three produced normal profiles. While these results were not particularly dramatic, they indicated that schizophrenics were at least capable of modifying the symptomatology by which they described themselves. In addition, this occurred under circumstances when there was no direct personal benefit to be derived from complying with the experimenter's request.

Ishiyama and Brown (1966) were concerned with investigating the importance of the patient role as a factor in psychiatric treatment. Operating in a large, traditional state hospital setting (total population = 2, 300) they devised a 45-statement questionnaire divided into five content categories: (1) treatment; (2) patient-patient interaction; (3) staff-patient interaction; (4) impulsivity; (5) responsibility. The questionnaire was then administered to 160 schizophrenics, equally composed of males and females, who had been in the hospital for at least three months. They were matched for age ($\overline{X}$ = 41) and education ($\overline{X}$ = 9 years). Unfortunately, there was no nonschizophrenic control group, an all too common defect in many schizophrenia studies. All subjects were administered the questionnaire in three forms. They were first asked to indicate their own opinions; in subsequent administrations they were presented with copies marked to indicate the "opinion of most staff members" and the "opinion of most patients." In each case, they were to again indicate their own opinions. One-half of the sample were given marked copies showing the staff as constricting and demanding, while

patients were portrayed as permissive; the other half received copies indicating the reverse orientation.

Results of the Ishiyama and Brown study revealed a role-ideal modified in all content areas except impulsivity with a general movement toward a high constricting referent. The only downward movement occurred in the area of patient-patient interaction, and then only when the referent was a low constricting staff. What is significant in these results is not only that schizophrenics were capable of modifying their role ideal as a function of social demands unrelated to constant, long-term pressures or simply the result of suggestibility. The significance is also that the shift occurred discriminatively with selective and systematic trends. This suggests that impression management by schizophrenic inpatients cannot be considered monolithically. Rather, there is likely to be the same degree of subtlety and complexity as would characterize a nonschizophrenic psychiatric group or a normal population. In considering their data, Ishiyama and Brown suggest that changes were a function of patients' realistic appraisals of their social situation in the hospital, one which was custodially oriented and hierarchically structured. This study lends support to the concept that schizophrenics remain in active contact with their environment and respond selectively to it. It may be inferred that similar responses in nonexperimental settings are consistent with achieving certain self-defined desirable outcomes. This component was not examined by Ishiyama and Brown, nor

was there any direct benefit to be derived by subjects from participation in the study.

The Braginsky work

A major series of experiments which serve as a landmark in the field of the purposefulness of schizophrenic behavior was undertaken by the Braginskys and their colleagues (Braginsky, Braginsky, & Ring, 1969). In retrospect their work is not without its flaws. What made their results so impressive, then and now, however, was the basic simplicity with which they approached their task. They also specifically brought to the study of abnormal behavior Goffman's (1959) concept of impression management. Their basic finding was that psychiatric inpatients were capable of using symptoms as behavior to control outcomes in a social situation. In so doing, their subjects demonstrated that they remained in contact with relevant aspects of their social environment, and manifested competence in maneuvering the environment to produce desired outcomes, including some which appeared to be contrary to the professionally and publicly defined purposes of the facility. Braginsky et al. demonstrated that these inpatients engaged in impression management through ingratiation and were capable of controlling their hospital fate through impression management via their symptomatology, both indirectly on impersonal paper and pencil tasks and directly in an interpersonal situation. Their subjects were primarily carrying a

schizophrenic diagnosis, but unfortunately no separate analysis was performed for this subgroup except in one experiment where all subjects were schizophrenics. In the other instances, the proportion of schizophrenics constituting the sample was 68 and 82%. It is reasonable to conclude that their findings have great importance in assessing the purposefulness of symptomatic behavior among schizophrenic inpatients.

An important characteristic of the Braginsky population was the predominance of long-term, chronic patients. In one experiment they compared a diagnostically mixed group of "Newcomers" (first admissions, hospitalized less than three months) and "Oldtimers" (hospitalized over three months) in two experimental conditions. Newcomers appeared to attempt regularly to create an impression of mental health despite one group having, in order to do so, to affirm symptoms a comparable set of patients disavowed. Oldtimers, by their inconsistent pattern of responses, conveyed an impression of mental illness. This sample (N = 20 in each group) consisted of 68% schizophrenics in each group. Here it would be particularly desirable to be able to compare the schizophrenics' results with nonpsychotic subjects. The data do suggest, nonetheless, that symptomatology is maneuverable in both directions to achieve a desired impression. Psychiatric inpatients apparently retained some active control over their behavior and their environment. In addition, when the Braginsky results are viewed as a whole, strong support is manifested for the importance of attending to social conditions, as

well as to personality factors, to explain deviant behavior.

The Fontana studies

Fontana and his co-workers reported a series of investigations addressed to the issues of impression management and the purposefulness of aberrant behavior (Fontana & Gessner, 1969; Fontana & Klein, 1968; Fontana, Klein, Lewis, & Levine, 1968; Klein & Fontana, 1969). In presenting their work, these researchers noted both Goffman (1959, 1961) and some of the preliminary work of the Braginsky group (Braginsky, Grosse, & Ring, 1966). The initial study (Fontana et al., 1968) focused on the basic issue of presentation of self in mental illness. Two explanations of psychopathology were offered. One viewed the patient as operating under some inner compulsion to act, while the alternative, proposed by Fontana et al., held that persons acted in the observed manner, e.g., nonsensically or illogically, because it led to the attainment of important rewards. The basic premise is that a considerable amount of psychopathological behavior is maintained and elicited in accordance with characteristics of the person's current social situation. The impression thus created is construed as basically instrumental to the attainment of other goals. The authors make a further point which is essential to an accurate understanding of this theory, particularly in light of later criticism. The concept of self-presentation as applied to psychiatric inpatients does not imply that they are always

consciously creating a role. It is suggested that much of the time they are probably not doing so, which, of course, is no different from other persons. However, it is no less likely for psychiatric inpatients than for people generally to be aware that the achievement of desired outcomes in the context of interpersonal relations is strongly influenced by the impressions made on others--an essential component of Goffman's (1959) theory. Similarly, these impressions are managed and accounted for, consciously or unconsciously, overtly or covertly.

For current purposes, the major value of the original Fontana et al. study lies in the theoretical model of psychopathology it proposed. The empirical findings were based on 247 patients of whom 166 were schizophrenics. These subjects were drawn from three hospitals and tested on several personality, attitude, and background variables, being ultimately classified as healthy or sick presenters on the basis of the amount of psychopathology they attributed to themselves. The latter was validated by nurses' judgments and personality and attitude variables which consistently differentiated the groups across diagnoses, buildings, and wards. The only other variable which did differentiate them was length of current hospitalization.

Fontana and Klein (1968) and Klein and Fontana (1969) specifically focused on schizophrenic subjects. Fontana and Klein (1968) examined the "schizophrenic deficit" concept in light of self-presentation. They demonstrated that the amount of "schizophrenic deficit" as measured by

a reaction time test was a function of self-presentation. These researchers found that the "deficit" was experimentally manipulable either in the direction of marked increase, or decrease to the point of elimination, by mobilizing the patients' motivation to create the desired impressions. Their subjects were 103 schizophrenics with ten hospital employees serving to provide baseline comparison data. Schizophrenic subjects were classified as healthy or sick presenters with one-half of each group being tested in either an evaluation or a nonevaluation condition. In the evaluation condition, subjects were told at a break that they had been performing like most mental patients. By taking patients' self-presentations and ward characteristics into account, it was possible to increase or decrease the deficit. The authors conclude that schizophrenic deficit may be better conceptualized as instrumental behavior toward desired goals different from those of others (normals). Fontana and Klein, referring to their data, state that schizophrenics do maintain contact with the reality of their environment, although they use this information toward deviant or pathological goals. It is reasonable to add that schizophrenics' goals are not necessarily uniformly aberrant, but that a significant proportion of them, either in direct interpersonal situations or in solitary behavior which is observable by others, perform aberrantly in what appears to be a goal-directed manner.

Klein and Fontana (1969) examined in greater depth the sensitivity of schizophrenic inpatients to the characteristics of their environment.

According to the theory advanced by this school, schizophrenics are considered to be reliable in their perceptions and reports. In this study, the hypothesis was advanced that attitudes toward important aspects of life could be related to differences in hospital settings. Fontana and Klein (1968) had previously found support for the importance of institutional characteristics on subjects' behavior. According to what Klein and Fontana (1969) characterize as the traditional view, schizophrenics would respond unsystematically and not be expected to differentiate among social situations. A sociopsychological view, on the other hand, claims that schizophrenics are both aware of their environment and understand the nature of the institutions in which they live, including subtler aspects of patient and staff behavior.

To evaluate this theory, 166 white male schizophrenic subjects were utilized in the study. Control was exercised by screening out brain damage and mental deficiency, while comparability was established for social competence, education, occupational level, and marital status. Subjects were drawn from four buildings of three different hospitals. Attitudes were assessed, in individual sessions, by obtaining Semantic Differential ratings on four concepts: Average Person, Myself, My Home, and This Hospital. Thus, two concepts referred to out-of-hospital referents while two related to the subjects' current situation. Subjects were told by the experimenter that their answers would be available to staff.

Neither Average Person nor the total score of the four scales yielded differences among the buildings. However, concepts interacted with buildings in an especially significant way when buildings were viewed as either treatment or custodial in nature, providing strong support for a sociopsychological perspective; schizophrenics demonstrated the ability to make meaningful comparisons, in an abstract fashion, between themselves and others. They also indicated maintenance of active contact with their environment, and the ability to use this information systematically. Clearly, these results are based on a rather global design. Unfortunately, no nonschizophrenic controls were similarly assessed, nor were schizophrenics broken down into subgroups. By noting the availability of their answers to staff, some incentive may have been provided for greater investment in the task. The possible influence toward saying what staff might like to hear is not evaluated, which is somewhat surprising in light of the authors' apparent sensitivity to the issue of impression management. An experiment's ability to provide subjects with personal investment in the task is of great importance in considering the purposefulness of the behavior produced and warrants specific consideration.

The issue of mobilizing subjects' investment in the experimental task is at the heart of another study--Fontana and Gessner (1969). Subjects were 75 male V.A. patients of whom 40 were nonpsychotic (e.g., anxiety reaction, depression, alcoholism) and 35 psychotics (of whom

89% were schizophrenic). While the data were analyzed for these two categories, schizophrenics were not analyzed separately. For all subjects, mean length of current hospitalization was 5.4 months. Again, it would be worthwhile to know comparability between schizophrenics and other subjects. Subjects were placed in one of three conditions: Research, Transfer, or Discharge. Basically, subjects were provided with different rationales for the study. In the Research condition, it was purportedly simply to gather data for the study, while in the Transfer and Discharge conditions subjects were told they were being evaluated either for transfer to another ward (which would actually have involved going to an older facility in a more rural area), or for discharge. All subjects were currently on treatment-oriented, open wards in the same hospital.

Three hypotheses were offered: (1) Subjects would demonstrate more pathology in the Discharge condition and less in the Transfer condition, relative to the Research condition; (2) Discharge condition subjects would describe themselves as less adequate and responsible, and transfer subjects as more adequate and responsible, both relative to the Research condition; and (3) psychotic and nonpsychotic subjects were expected to perform comparably. Results of the Fontana and Gessner study revealed some consistent patterns. Subjects were indeed less deviant in the Transfer condition, but it was significant only on measures specifically examining pathology. These measures were scales for

attribution to self of pathology, chronicity, and MMPI items. Furthermore, subjects in the Discharge condition typically fell between the means for the Research and Transfer conditions. Psychotics' pattern of responses was consistently parallel to that of nonpsychotics. The authors speculate that a finding of no differences on their adequacy-responsibility dimension may have been due to the incompatibility of that dimension with the patient role. The importance of this study was to demonstrate that psychiatric patients, including psychotics, behaved in a goal-oriented fashion. Transfer was strongly supported as a viable manipulation, while Discharge emerged less clearly in this respect, although not to the extent that it warranted rejection for further use. The larger variability of scores in the Discharge condition was partially accounted for by examining the role of service vs. nonservice connected disabilities in this all-V.A. population. Men with a 100% disability had more hospitalizations, as well as a greater tendency to stay in the hospital longer. These data suggest that explanations based solely on monetary payments are oversimplifications.

This series of studies provides systematic empirical evidence for a theory considering the purposefulness of behavior among psychiatric inpatients. Most relevant for current purposes was the performance among schizophrenics. Unfortunately, the tendency was to lump either all psychotics or all inpatients together. This clouds the relevance of these results to some extent; when schizophrenics were considered

separately, there was no finer discrimination among types of schizophrenics. Of course, a major variable utilized in the Fontana studies focused on healthy vs. sick presenters, and it was on this dimension that primary attention was often focused. As a series of innovative, stimulating, and provocative studies, they remain worthy of respect and deserve recognition for their role in directing attention to the purposefulness and goal-directedness of aberrant behavior, stemming, in the final analysis, from psychiatric inpatients' ability to maintain direct contact with their environment.

The Watson studies

Watson (1972a, 1972b, 1973) produced several studies to assess further the role of self-presentation and impression management. The first study (1972a) focused on the ethical component of self-presentations by comparing schizophrenics, prisoners, and normals. Subjects were 99 inpatient V.A. schizophrenics (55 process, 44 reactive), 32 prison inmates, and 55 normals who were employees of the V.A. While education was comparable across groups, age was not (mean ages were 42.6, 39.6, 33.3, and 43.7, respectively). Subjects were administered a 20-item "Ethics Inventory" consisting of three choices per item: moral, antisocial, and aversive. The items themselves were divided into ten pairs of parallel-content, high or low stress, items. Subjects were instructed to predict which of the three choices would best describe their

course of action.

After one week, 24 process schizophrenics, 27 reactives, 30 prisoners, and 25 normals were retested. Prisoners demonstrated the greatest stability across conditions (.84 to .96). Normals were in the middle (.62 to .84), while both process and reactive schizophrenics were lower (.00 to .67, and .17 to .81, respectively). While almost all prisoners were retested, less than half the normals and process schizophrenics and slightly more than half the reactive schizophrenics were retested. Together with the age difference, conclusions which can legitimately be drawn from the test-retest scores must be guarded at best, and the author's conclusion that the ethical self-presentations of schizophrenics are less stable than normals must be qualified. Watson suggests this may be due to the limited ability of schizophrenics to think abstractly, leading to vague, less-defined ethical standards. An alternative explanation is to consider the meaning of the tasks for the subjects involved. Normals and prisoners are both in more clearly defined social situations, in that the normals were presumably voluntarily cooperating with a professional in their place of employment. Prisoners, while potentially having something to gain from participation, are serving fixed sentences and engaging in a task for an outsider, again presumably on a voluntary basis. The speculation on these issues stems in part from the absence of a detailed report of procedures, and thus the actual rationale, if any, presented to subjects is unclear. Schizophrenic subjects, however, are

in the most nebulous situation, and it is unclear what they perceived the potential outcome to be. Clearly, the nature of the basic instruction "to predict the alternative best describing your course of action" lends itself and may even be construed as an invitation to impression management. The speculation that schizophrenics were more unstable on test-retest because of restricted abstracting ability is definitely questionable in light of the broader context of impression management. As was demonstrated earlier by Klein and Fontana (1969), differences in institutional atmospheres can also account for significant differences. This could well extend across, and even be more likely between, institutions established for different purposes.

On the basic question of the ethics of the self-presentations of the subjects in this study, results based on the original administration to all subjects revealed only two of nine potential differences between schizophrenics and normals. These two were the scores for the Anti-social, Non-stress factor and the total Anti-social score. On these scales, reactives and normals produced significantly higher Anti-social means than the process schizophrenics, with differences being nonsignificant between reactives and normals. These findings also illustrate the value of breaking schizophrenics into at least two discrete groups. Watson concludes that schizophrenic values are not more or less antisocial than normals. This conclusion seems warranted, in that means of the normal and schizophrenic groups tended to be similar to one another and

considerably different from those of prisoners. Furthermore, process schizophrenics presented themselves as the least antisocial in some situations.

The issue of ethics and schizophrenic values is important. To some extent, however, the question as raised here is something of a "straw man." It may simply be that Watson was playing the role of a scientific "devil's advocate," or the concern raised may be heavily value-laden itself in that the whole concept of impression management and the purposefulness of aberrant behavior can be experienced as threatening. Early in the article, there is some implication that the work of the Fontana group demonstrated a sociopathic value orientation for schizophrenics. The use of "sociopathic" in the context of this research is entirely inappropriate. Watson's (1972a) data suggest that, while schizophrenics may be able and willing to engage in impression management, they are not necessarily antisocial or sociopathic. In fact, these schizophrenics behaved quite like normals. The real question is not whether they are more or less moral in utilizing impression management, inasmuch as it may be frustrating to professional staff despite the latters' potential collusion in the process. The basic task is to develop a broader understanding of the process and the purposes it serves in order to expand a conceptual framework of psychopathological behavior and stimulate treatment responses designed to broaden patients' skills based, in part, on strengths already there.

Watson (1972b) examined the roles of impression management in the interview, self-report, and cognitive behaviors of 101 male schizophrenics who were all residing on open wards at the time of their participation in the study. There was no nonschizophrenic comparison group. Subjects were asked to report for a morning of testing and interviews. The experimental manipulation was made by a receptionist prior to the start of this round of activity. Subjects were implicitly threatened with return to a closed ward (N = 33), discharge (N = 36), or were presented with neutral instructions (N = 32). No mention was made of whether the experimenter, who actually worked with subjects to produce data for the dependent variables, was blind to the condition. Similarly, while means for age, education, and number of months of psychiatric hospitalization for all 101 subjects were documented, no comparison among groups was presented.

No significant differences were found on interview behaviors (measures were: Program Evaluation Staff Clinical Interview [Moroney, 1966] and an update of the Symptom Rating Scale [Cohen, Gurel, & Strumpf, 1966]) or for cognitive functioning (measures were: Shipley-Hartford raw score; Gorham Proverbs [Gorham, 1956] and an autism scale [Shimkunas, Gynther, & Smith, 1967]). Results for autism and the Shipley-Hartford approached significance. Significant results were found, however, on some scales of the MMPI (short form). The Discharge group produced more pathological scores on the Hypochondriasis

and Psychasthenia subscales ($p < .05$) with significance being approached on Depression, Hysteria, and Social Introversion. On all of these scales the order of the means, from high to low, was Discharge, Closed Ward, Neutral. There were no interaction results between personality/demographic variables and instructional sets. This included no difference on the standard Ullmann and Giovannoni (1964) Process-Reactive measure. Watson (1972b) notes that, consequently, there were no specific indications about what subgroups of schizophrenic patients are more likely to engage in impression management. Conversely, it can be stated that all schizophrenic patients appear to be engaging in some form of impression management, although there may be subgroup differences in the way it is utilized, which were not determined in this study.

Watson (1972b) suggests that impression management may play a larger role in determining the "neurotic" aspects of behavior among schizophrenics. Certainly for the subjects in this study, this appeared to be so. Watson also states that specific types of impression management are not peculiarly indigenous to schizophrenics. Here again, there appears to be some implicit need to justify on moral grounds that schizophrenics are not bad because their behavior is purposeful. What is remarkable about Watson's statement is that the concept it represents, that is, schizophrenic behavior operates according to some principles similar to those of other people--normals--represents a marked departure from traditional views of schizophrenic patients. The results in

this study provide additional support for viewing at least some schizophrenic behavior as purposeful. The use of the particular manipulation employed, similar to that of Braginsky et al. (1969) and Fontana and Gessner (1969), again emerges as meaningful. The suggestion that schizophrenics can manage the "neurotic" as well as perhaps the more florid aspects of their behavior lends further credence to the theory that they retain some control over their lives and remain attuned to important dimensions of social interaction.

In the next study (Watson, 1973), nurses in a V.A. hospital were asked to identify their "most conspicuously psychotic" patients based on their nonverbal behavior. This yielded 44 male schizophrenics who were then randomly assigned to two equal groups. There were no differences for age, education, and months of previous hospitalization. The procedure had subjects called to an appointment with a Dr. A. and told to wait. All subjects were reminded that Dr. A. is "one of the people who consults with your doctor as to who should leave the hospital, who should be on closed ward and so on." In the Threat condition, the receptionist told subjects when they first arrived at the office that a serious problem had come up in their case, and Dr. A. would talk with them about it in a few minutes. Nonthreat subjects did not receive this information. Subjects were kept waiting for 10 minutes. During the first or second five-minute period (divided equally in both conditions), a staff psychologist from the subject's ward was brought in who also was "waiting to

see Dr. A." Subjects' behavior was videotaped during the entire 10 minutes from behind a one-way mirror. After the 10 minutes, subjects were administered several personality/demographic scales, including the Ullmann-Giovannoni Process-Reactive measure. Thus, subjects were in a threat or a nonthreat condition with half of their behavior observed in Authority Present and half in Authority Absent conditions. There was no nonschizophrenic control group.

The tapes were rated by two raters, a psychometrist and a technician, on several four- to seven-point scales. Interrater correlations ranged from .42 to .78. There was no description of rater training or of the bias of the scales. Raters were blind to the subjects' experimental condition. Data analysis yielded significant Authority Figure x Threat interactions for six of the 18 analyses, with Authority Present scores less abnormal than Authority Absent scores. On five of these six variables, significant simple effects appeared in the Nonthreat group. No relationship was found between impression management scores and demographic variables. Watson concludes that even conspicuously abnormal schizophrenics can, at least to some degree, manipulate the impressions they make on people. He suggests that his results are inconsistent with the viewpoint that schizophrenics as a matter of course produce conspicuous, abnormal behavior to elicit succorance from the hospital environment. The latter is a misrepresentation of the basic "purposeful behavior" perspective which does not necessarily claim that

all of the aberrant behavior manifested by schizophrenics can be explained from impression management theory.

Watson notes that impression management was in the direction of improved, that is, less socially aberrant behavior. His methodology makes the strength of such a finding weaker in two ways. One, the patients were pre-selected in a way which guaranteed that they were at the extremely aberrant end of the scale. Two, all subjects were reminded that Dr. A. influenced who was discharged and who was sent to closed wards. While this likely increased subjects' personal investment in the task, it is unclear whether both potential outcomes (discharge and closed ward) operated in the same fashion. Particularly in light of the pre-selection procedure, it is not surprising that the predicted relationship between threat and apparent abnormality did not materialize. Watson suggests that the Authority Figure effect was significant only in the Nonthreat condition because threat subjects were so preoccupied at the prospect of a difficult meeting with Dr. A. that they failed to attend to the authority figure's presence. This is a tenable explanation, but clearly speculative. In itself, it can thus be interpreted as enhancing the idea that even highly aberrant schizophrenics are in touch with significant elements of their environment and can think ahead. After all, if Dr. A. is the person one needs to impress, which is clearly the case in the threat condition, that is the person to whom impression management would be most appropriately directed. To "impress" an

empty room or another person would suggest a truly more bizarre and unsystematic approach. It can again be concluded that schizophrenic behavior, whether from impression management or another perspective, is best not conceptualized in homogeneous terms; rather, the same subtlety and complexity as is true for other persons appears to be operating, and must be approached accordingly.

Despite certain methodological weaknesses and some tendency to apparently misunderstand the intent of earlier impression management research with schizophrenics, the Watson studies make a worthwhile contribution to the small body of studies in this area. Basic support for the purposefulness of at least some aberrant behavior at least some of the time was presented. It continues to become more evident that the nature and form of this impression management is not without subtlety requiring more fully developed theory. Two of the studies also demonstrate the utility of the Discharge-Open/Closed Ward manipulation. Unfortunately, in at least one of the studies (Watson, 1973), insufficient attention was given to this means of enhancing subjects' personal investment in the experimental task.

Five diverse studies

Tyron and Tyron (1972) reported insignificant results using a more complex design based on the Fontana et al. (1968) study. They were primarily concerned with the role of feedback. They continued to use a

healthy vs. sick presenter and anticipation vs. no anticipation of evaluative feedback model, to which was added three feedback conditions: positive, negative, and none. Subjects were 84 white, male schizophrenics. There was no nonschizophrenic control group, nor apparently a further breakdown among the schizophrenics. A digit symbol task served as the dependent measure. It would appear that both the latter measure and the failure to provide subjects with any motivation to participate beyond altruism, and their status as a captive population, resulted in minimal personal investment in a task which had little "real-world" value. This clearly mitigated against getting results. If schizophrenics do use impression management, it is reasonable to suggest that they use it selectively rather than mechanistically. The nature of this experimental situation lent itself to subjects' selectively opting out of using it as an opportunity to engage in impression management precisely because it probably seemed to be devoid of any purpose for them. As such, the study is more reminiscent of the hundreds of schizophrenic deficit studies which pervade the literature.

A similar type of study was undertaken by Price (1972). Again, the referent was the Fontana et al. (1968) model. In this case the dependent measure was word association performance, and subjects were 40 male and female schizophrenic inpatients; there was no nonschizophrenic control group. While partial results were obtained, this study is subject to criticisms similar to those made of Tyron and Tyron's

(1972) study, which need not be repeated. Price (1972) found that healthy presenters were more able to shift sets and engage in impression management than sick presenters. He concluded that impression management theory was partially confirmed, with the likelihood of its occurrence depending on the degree of pathology displayed by subjects. An alternative explanation is that sick presenters require greater investment in the task to produce a shift in sets, and are not as likely to use impression management at a purely abstract level. In addition, the use of a healthy vs. sick presenter model in itself appeared to be limited as an experimental model.

The remaining studies are not based on the early impression management-purposefulness experimental design of the Fontana group. They are related, however, in addressing schizophrenics' ability to create differential impressions and maintain adequate contact with certain relevant aspects of their environment. Thaw (1971) examined the role of another person's perceptions on schizophrenics. Subjects were 60 schizophrenic inpatients. Using a confederate posing as a college student volunteer, subjects were informed of the confederate's attitude. Subjects believed they were being viewed as either Mentally Ill (M.I.) or as no different from normal individuals (N).

There were three phases to the study. In Phase I, measuring simple social behaviors, subjects in the M.I. condition made significantly more favorable responses. Thaw suggests that these subjects

felt they had to work to convince the confederate that his unsavory view of the subject was unwarranted. In Phase II, an interview, subjects who experienced the confederate as peer-oriented were more alert than those who were patronized. Thaw notes that the schizophrenic patient's alleged investment in being left alone was noticeably altered when interacting with a college student who behaved in a peer-oriented, sincere manner. Phase III utilized a paired-associate learning task. N-condition subjects performed significantly better than M.I.-condition subjects, allegedly because N-subjects having been viewed as competent felt a greater demand to perform well on a more challenging task. They were also rated as more cooperative and motivated by the confederate.

Thaw suggests that the major implication of this study is that at least some aspects of schizophrenic behavior are traceable not to the patient, but to the social and interpersonal conditions existing in the hospital. He further states that the sweeping explanations inferring the grand nature of schizophrenia made in studies of performance deficits on certain tasks simply are not tenable. While the results of this study may be subject to other interpretations, two facts are clear. One, the contextual situation plays an important role, and schizophrenics are not reacting to it mechanistically or unidirectionally. Two, they retain some control over their behavior and apparently their motivation, as well as rationally exercising choices to achieve certain objectives much like other people do.

Kelly, Farina, and Mosher (1971) utilized a similar paradigm with 56 female schizophrenic inpatients who were matched for length of hospitalization and age in two conditions. Subjects were asked by the experimenter to create either a favorable or an unfavorable impression prior to an interview in which the interviewer was a blind confederate. The results suggest that schizophrenic women appeared to be capable at will of creating favorable or unfavorable impressions, even without much personal investment in the task. However, the experimenter in approaching subjects was implicitly stating confidence in their ability to engage in impression management and thereby presumably help the experimenter and his confederate. This is in marked contrast to the implicit message presented subjects in most schizophrenia studies.

In analyzing these data, Kelly et al. found a trend, but not at the level of significance, that good pre-morbid subjects, with a history of more sustained interpersonal interactions, were more skillful in being likeable or unlikeable than subjects whose pre-morbid social interactions were more limited. This, of course, would be in the predicted direction. However, it is also consistent with other findings noted earlier in which personality-demographic characteristics have not always yielded significant results. It may be that these studies were not attending to the appropriate personality variables. In addition, the variables were not always created according to predetermined criteria which were established within the design.

Sherman, Sprafkin, and Higgins (1974) reported an ingenious study in which inpatient subjects were asked to assess the impression management of other psychiatric inpatients. Several methodological weaknesses are worthy of note before presenting the design and results. Subjects were 100 male V.A. patients with a mean age of 42 (range: 21-67). Their range of hospitalization, however, was very large--from three days to 18 years, with a mean of 225 days. This is an excessively large range and was not accounted for in the results, in that comparisons for different lengths of hospitalization were apparently not made. Similarly, subjects were carrying a variety of diagnoses: 64 schizophrenics, 16 nonschizophrenics, 20 alcoholics. Again, no comparison by diagnosis was carried out. Consequently, it is not possible to assess the performance of schizophrenics alone, let alone for any breakdown among the schizophrenics.

Subjects listened to a 50-second audiotape of a "patient's" interview with his psychiatrist. There were four variations/conditions corresponding to whether the patient wanted to (a) stay or (b) leave the hospital and whether the doctor wanted the patient to (a) stay or (b) leave the hospital. The patient in either case indicated that he would use impression management, that is, behave in a way to convince the staff he should be allowed to leave or stay. After listening to the tape, subjects were asked a number of questions which constituted the dependent measures. They were administered the Ullmann-Giovannoni Scale (1964)

to determine a healthy vs. a sick presenter orientation, either before or after hearing the tapes.

Sherman et al. (1974) found that subjects' opinions acknowledged the impact patients believe they have in determining their hospital fates. Subjects projected a longer hospitalization for another patient if he intended to manage the impression of sickness to stay in the hospital than if he planned to act healthy to secure an early discharge. Subjects were also influenced by the psychiatrist's opinion on discharge. Hence, the opinion of both principals was significant, suggesting a careful, thoughtful assessment was being made. Added support for this conclusion was the subjects' use of their own perceptions of the patient's mental health. When the patient and psychiatrist disagreed on the undesirability of early discharge, subjects' judgments of length of hospitalization were longer and correlated strongly with subjects' perception of the patient's mental health. The latter was apparently not influenced by the patient's impression management goals or by the psychiatrist's opinion. Sherman et al. note that this finding is consistent with reports that many people enter and remain in a psychiatric hospital for reasons other than those stated within traditional conceptualizations of "mental illness."

Two other interesting findings emerged from these data. One, the patient's expressed intention toward early or late discharge significantly affected the way subjects viewed him. The patient was seen as less likeable and less desirable as a friend when he intended to manage the

impression of illness rather than health. Two, subjects' own self-presentations were influenced by whether they were measured before or after listening to the tape. A less healthy orientation occurred after listening to the tape. The authors speculate that the tape made issues of self-evaluation and impression management more salient, provoking subjects opposed to discharge for themselves to present a less healthy self-image. For both of these findings, as well as the major ones reported above, an analysis by diagnostic groups might throw greater light on these issues. Nevertheless, the study is valuable in documenting psychiatric inpatients' ability to acknowledge the efficacy of impression management as it relates to the potential purposefulness of aberrant or healthy behavior. In addition, psychiatric inpatients, most of whom were schizophrenic, were able to utilize this and other information in a considered and thoughtful fashion.

Overview of impression management-purposefulness studies

Seventeen studies dealing with the concept of impression management and the purposefulness of aberrant behavior have been discussed. All but one were reported in the literature between 1966 and 1974. The theoretical foundation for most of this research stems from Goffman's (1959) pioneering work on impression management theory and Fontana, Klein, Lewis, and Levine's (1968) and Braginsky, Braginsky, and Ring's (1969) formulation of a psychosocial theory to account for at least some

of the aberrant or deficit behavior displayed by psychiatric inpatients. Subjects in these studies were composed exclusively of schizophrenics (ten studies), schizophrenics and one or more control groups (three studies), or of a mixture of psychiatric inpatients in which schizophrenics were prominently numbered (four studies). The importance of the impression management approach as applied to schizophrenics is not to deny their apparently poorer general social adaptation. Instead, it attempts to provide a broader theoretical and empirical framework with which to analyze and consider not only the weaknesses but the strengths of schizophrenics' social skills and processes. Similarly, as Fontana et al. (1968) have noted, the theory does not purport to account for all psychopathological behavior--only for a significant proportion of it. It then becomes important to define for which patients and toward what goals schizophrenics can effectively manage both their normal as well as their aberrant behavior.

These studies, taken together, strongly suggest that schizophrenics can and do retain meaningful contact with, and are responsive to, the social demands of their environment (Braginsky et al., 1969; Fontana et al., 1968; Fontana & Gessner, 1969; Fontana & Klein, 1968; Grayson & Olinger, 1957; Ishiyama & Brown, 1966; Kelly et al., 1971; Klein & Fontana, 1969; Sherman et al., 1974; Thaw, 1971; Watson, 1972a, 1972b).

When the experimental design permitted detailed assessment, this

responsiveness appeared to be discriminating and systematic (Braginsky et al., 1969; Fontana & Gessner, 1969; Fontana & Klein, 1968; Ishiyama & Brown, 1966; Klein & Fontana, 1969; Sherman et al., 1974; Thaw, 1971; Watson, 1972b, 1973); was demonstrably purposeful (Braginsky et al., 1969; Fontana & Gessner, 1969; Fontana & Klein, 1968; Thaw, 1971; Watson, 1972b, 1973); revealed that subjects acknowledge the efficacy of impression management (Sherman et al., 1974); and occurred in an ethical, that is, a non-antisocial, fashion (Watson, 1972a). These results were based on a direct assessment of impression management and purposefulness. It is interesting to note that other investigators, while not assessing this variable, are capable of making reference to it and implicitly accepting its existence. For example, in a recent study on the effects of phenothiazine withdrawal on the proverb interpretation of chronic schizophrenics (Chapman, Cameron, Coche, & Pritchett, 1975) the authors note:

> We were not able to divide meaningfully our schizophrenics into paranoid and nonparanoid because most of them, being chronic and disorganized but yet wise in the ways of the hospital, did not communicate their beliefs clearly. (Underlining added) (p. 28)

It is clear that these authors, perhaps best measured by their own frustration, accept that even chronic, disorganized patients, either despite being actively psychotic or simply suffering from long-term institutionalization, retain some overt control over their lives.

These results were obtained across several categories of dependent

measures: cognitive learning (Fontana & Klein, 1968; Price, 1972; Thaw, 1971); pathological behavior (Braginsky et al., 1969; Fontana & Gessner, 1969; Grayson & Olinger, 1957; Kelly et al., 1971; Thaw, 1971); interpersonal interaction (Braginsky et al., 1969; Ishiyama & Brown, 1966; Kelly et al., 1971; Thaw, 1971; Watson, 1973); and self-image (Klein & Fontana, 1969; Sherman et al., 1974; Watson, 1972a).

Most studies reported changes in the current or projected behavior of subjects. This occurred either by self-report (Braginsky et al., 1969; Grayson & Olinger, 1957; Ishiyama & Brown, 1966; Klein & Fontana, 1969; Sherman et al., 1974; Watson, 1972b) or by observed behavioral differences (Braginsky et al., 1969; Fontana & Gessner, 1969; Fontana & Klein, 1968; Price, 1972; Thaw, 1971; Watson, 1973).

While the results of this research are stimulating and provocative, several methodological issues clouded fullest evaluation of the data. As has been repeatedly noted, studies varied in the manner in which schizophrenic subjects were utilized. When the basic focus was on this group of people there was often no nonschizophrenic control group (Braginsky et al., 1969; Ishiyama & Brown, 1966; Kelly et al., 1971; Klein & Fontana, 1969; Price, 1972; Thaw, 1971; Tyron & Tyron, 1972; Watson, 1972b, 1973). Some studies examined a diagnostically mixed group of subjects without differentiating schizophrenics in reporting the results (Braginsky et al., 1969; Fontana et al., 1968; Fontana & Gessner, 1969; Sherman et al., 1974). Even where the basic focus is not on schizo-

phrenics, it would seem essential to consider diagnostic effects on results. It is frustrating to review a well-conceived study with important results, such as Sherman et al. (1974), and be struck by the relative ease with which it could have been methodologically strengthened to add even greater import to the results. Some studies did utilize both schizophrenic and control groups (Fontana & Klein, 1968; Watson, 1972a), or at least considered diagnostic differences in reporting the results (Grayson & Olinger, 1957). The latter number is clearly the smaller although it should be the larger, with aberrations occurring only when compelling theoretical or methodological issues dictate.

Approximately one-half the studies (N = 9) made some attempt to divide schizophrenic subjects into two groups. The desirability of not treating schizophrenics as an homogeneous entity is clearly indicated, although this recommended practice is by no means universal (Cash, 1973). A further problem emerges in terms of how to subdivide schizophrenics meaningfully. The studies reviewed here have basically utilized a healthy vs. sick presenter or a process-reactive/good premorbid-poor premorbid dichotomy. The healthy vs. sick presenter concept was an essential element of the Fontana studies and was validated in the original work (Fontana et al., 1968). It continued to prove useful in later studies (Fontana & Gessner, 1969; Fontana & Klein, 1968; Price, 1972) although failing to produce results in one instance (Tyron & Tyron, 1972). It formed an essential part of the design in all cases. On the whole, it

appears to have continued limited merit when self-presentation needs to be measured prior to or outside the experimental situation.

The process-reactive/good-poor premorbid dimension yielded results in only two studies (Sherman et al., 1974; Watson, 1972a), and failed to produce results in the remainder (Kelly et al., 1971; Watson, 1972b, 1973). In the two instances where significant results were found, they occurred in a limited fashion. In Watson's (1972a) study, the measure had been incorporated into the design. In the other studies, it apparently constituted an additional measure. Clearly, this dimension has had mixed utility in this area of research, a judgment shared by other reviewers. Higgins (1969), in an extensive analysis of the process-reactive literature from 1962-69, found the results to be essentially confusing and decidedly unconvincing. Although contradictory studies were few, Higgins found more nonsupportive than supportive evidence for the efficacy of the concept.

What is striking about the studies reviewed here is that none have used the other major way of separating schizophrenics: the paranoid-nonparanoid dichotomy, which has also been recommended for further attention and study (Buss & Lang, 1965; Cash, 1973; Johannsen, 1964; Silverman, 1964). Given the paucity of results using the process-reactive dimension, use of a paranoid-nonparanoid difference would be worth investigating in future impression management research with schizophrenics. It would also appear to be worthwhile, based both on

the successes of the healthy vs. sick presenter concept and the more limited ones of the process-reactive measure, to incorporate this element into the experimental design rather than using it as an "add-on" measure.

Demographic or other personality factors produced no or few results (Fontana et al., 1968; Fontana & Gessner, 1969; Watson, 1972b, 1973). Fontana et al. found length of current hospitalization to be a significant factor. It was definitely controlled for in some later studies (Kelly et al., 1971; Watson, 1972b, 1973), but quite dramatically was not in another (Sherman et al., 1974). It was particularly noticeable in Sherman et al. because the range of time spanned 18 years. It is unclear what the critical level and range of differences are, but differences in the order of days, weeks, and even months are obviously more tolerable than those measured in years. While, on the whole, demographic factors so far have not been indicated to be influential in this area, it remains important to continue to control for these factors to establish good comparability across groups.

While Braginsky et al. (1969) clearly mentioned that the experimenter was blind, some investigators failed to note whether the experimenter was blind to diagnosis or condition (Fontana & Gessner, 1969; Price, 1972; Tyron & Tyron, 1972; Watson, 1972b, 1973). For the sake of methodological tightness, it remains important to keep the experimenter blind to diagnosis and, when possible, to condition. In some

instances, namely, when the experimenter administers the experimental manipulation, this is not possible. In those cases, blindness to diagnosis should be maintained and procedural safeguards undertaken to minimize the experimenter's potential confounding role.

An important dimension which emerges from some of these studies is the issue of providing subjects with personal investment in the experimental procedure. This factor is essential to creating a condition in which subjects have some clear reason for engaging in impression management and providing an element of purposefulness to the endeavor. Thaw (1971) inferred that a wish to maintain the positive image conveyed by the experimenter served as a motivation for subjects in one of his conditions. A number of studies (Braginsky et al., 1969; Fontana & Gessner, 1969; Sherman et al., 1974; Watson, 1972b) using several variations have demonstrated the experimental utility of the Open-Closed Ward/Transfer-Discharge concept as an effective manipulation which serves to provide subjects with some degree of investment in the procedure. These results are encouraging for the further use of this concept. The Open Ward-Transfer category emerged more consistently in mobilizing more variation in pathological behavior (Braginsky et al., 1969; Fontana & Gessner, 1969) than did the Discharge-threat category. The latter produced both a more pathological orientation (Braginsky et al., 1969; Watson, 1972b) and a mixed result (Fontana & Gessner, 1969). Although one Braginsky et al. (1969) study indicated that length of current

hospitalization might be a factor in determining attitude toward Discharge, the two positive results cited were based in one case on a chronic (approximately 10 years) population (Braginsky et al., 1969) and the other on a short-term (less than 6 months) population (Watson, 1972b). For the moment, therefore, the balance tentatively suggests the threat of Discharge produces more pathological behavior.

One final comment about this overview of the impression management purposefulness research can be made. Although 16 of the 17 studies were published in the 1966-74 period, none made any reference to informed consent. In an era of increased concern about the use of human subjects in all areas of scientific research, this is a factor which must be addressed and considered. As a topic in its own right, it has not received much attention in psychological and psychiatric literature, a recent exception being Romano (1974). Yet, emerging guidelines have important implications for the nature and methods of future research. It may be that none of the investigators considered here were required to utilize an informed consent procedure, and apparently none voluntarily adopted one. This course, either in practical or ethical terms, is no longer appropriate. In order to evolve intelligent and reasonable guidelines able to meet the twin demands of adequate protection of the rights of psychiatric inpatients and the standards of sound research, researchers must begin to discuss their informed consent procedures openly and address the problems involved with creating and implementing them.

Foundations for an Experiment: The Shimkunas Study

Shimkunas (1972) tested the hypothesis that schizophrenics behave in a bizarre manner in order to avoid intense interpersonal relationships. The design and theory stemmed from the work of Haley (1963) and Jourard (1964), and historically from Cameron (1938, 1947) and Sullivan (1944). Essentially, this view of schizophrenic behavior states that a schizophrenic's previous interpersonal experiences have been so unpleasant that he/she has developed bizarre behaviors that are functional in mitigating his discomfort. Consequently, these behaviors serve both to preclude close relationships and to maintain a disturbed, nonintimate approach to interacting with others. As Shimkunas (1972) notes, it is a compelling hypothesis.

The Shimkunas study was designed to test directly the hypothesis that schizophrenics evidence bizarre and inappropriate language to escape intense interpersonal discourse, thereby avoiding interpersonal relationships. Shimkunas contrasted this direct approach with earlier empirical studies demonstrating schizophrenic inferiority to normals on tasks involving social stimuli (e.g., Davis & Harrington, 1957; Lebow & Epstein, 1963; Moriarty & Kates, 1962; Whiteman, 1954). A major criticism of this body of research was the irrelevance of the experimental designs to the actual life experiences of the schizophrenic subjects. Similarly, Shimkunas noted that later and more direct tests of the interpersonal hypothesis (e.g., Berkowitz, 1964; Brenner, 1967; Gelburd &

Anker, 1970; Wolfgang, Pishkin, & Rosenbluh, 1968) used responses to cognitive and motor tasks as dependent variables. Consequently, Shimkunas (1972) wanted to use actual interpersonal behaviors as his dependent measures.

The actual design and predictions proceeded partly from the theoretical postulates of Haley (1963) and Jourard (1964). Haley maintains that communication is the basis of the definition of interpersonal relationships in which an individual's message sets the parameters for his/her interaction with another person. These reflect control within the relationship where the receiver either accepts the definition of the relationship as set by the sender's message or seeks to redefine it, thus taking control. Jourard suggests that a consideration of personal vs. superficial disclosure provides the basis for understanding interpersonal communication. Willingness to disclose intimate feelings and experiences is equated with psychological adjustment. Emerging from these theories, Shimkunas indicates that the schizophrenic's incongruent messages constitute a barrier to others interacting with him/her. Relationships are controlled by defining them as nonrelationships via covert maneuvers (bizarre messages). The schizophrenic can redefine the relationship without demonstrating overt responsibility for doing so. Shimkunas (1972) thus assumed that "schizophrenics would be highly avoidant of establishing an intense relationship as defined by meaningful and intimate self-disclosure about a number of important life experiences" (p. 198).

In this study, the experimenter presented subjects with a demand for either personal or impersonal self-disclosure. Shimkunas predicted that schizophrenics in the personal demand condition would redefine the relationship by avoidance or by engaging in suspicious, delusional, or autistic verbalizations. Schizophrenics in the "personal" condition were expected to be highly autistic, while paranoid schizophrenics would also be markedly avoidant, suspicious, and delusional. Nonschizophrenics were expected to show a more intimate level of self-disclosure in the personal condition, with all groups being equally superficial in the impersonal demand condition. Schizophrenics in the latter condition were not expected to demonstrate the bizarre behavior anticipated in the personal condition.

Subjects in this study were composed of 20 persons from each of three diagnostic groupings: paranoid schizophrenics, nonparanoid schizophrenics, and nonpsychotics. They were all inpatients in an urban mental health center, which was an intensive treatment facility for indigent citizens. The experimenter was blind to patient diagnosis and modeled personal or impersonal disclosure on eight tape-recorded topics during the procedure. Five seven-point rating scales were used to assess patient responses on the eight topics, and constituted the dependent measures. Results strongly supported the original expectations. Two x three ANOVAs revealed significant effects for Diagnosis on personal disclosure, avoidance, delusional thinking, and autism; a

Disclosure Condition effect on personal disclosure, suspiciousness, delusional thinking, and autism; and a Diagnosis x Disclosure Condition interaction on personal disclosure, delusional thinking, and autism. Nonpsychotics in the personal condition were significantly more disclosing than all others. Paranoids avoided significantly more than nonpsychotics, as well as being significantly more delusional in the personal condition than both other groups in both conditions. In addition, both paranoid and nonparanoid schizophrenics in the personal condition were significantly more autistic than schizophrenics in the impersonal condition and nonpsychotics in both conditions.

Shimkunas (1972) has provided a well-designed and well-executed study proceeding from carefully defined assumptions. His groups were well matched on demographic variables except "number of years since first hospitalization," which was greater for both nonparanoid schizophrenic groups. The author described the stringent manner in which the topic narratives were created and assessed to maintain similarity of content, but with an essential difference in personal vs. impersonal modeling. The topics themselves ranged from "love" to "the future." It is unfortunate, therefore, that Shimkunas did not consider topic effects in his data analysis.

Shimkunas' study provides a clear answer to the limited questions he investigated. It does not, however, consider the purposefulness of schizophrenic behavior in a broader context. A major criticism

Shimkunas made of earlier studies was the irrelevance of their designs and measures to the actual life experience of schizophrenic subjects. Thus, he wanted to assess directly actual interpersonal behavior and very successfully did so. However, his design and procedure failed to provide subjects with any personal investment in the task. Schizophrenics may well be more threatened by demands for personal self-disclosure, leading to redefinitions of the relationship via bizarre verbal behaviors, in a situation in which there is clearly no large goal. It is unknown, however, how they would behave if they perceived a broader personal outcome as a function of participating in the task. Shimkunas' theoretical assertions appear to be valid for the context in which they were advanced. Continued assessment of the contextual role through introducing an overt invitation to impression management might further increase understanding of the meaning of schizophrenic behavior. Shimkunas' work can be reconsidered with the relative importance of a demand for intimate self-disclosure retested in light of a broader purposefulness for schizophrenics' behavior.

The Experiment

A primary task of contemporary psychological research is to systematically integrate existing theories and the array of empirical evidence emerging from them. The field of psychopathology, in which schizophrenia research is a prime example, has long tended to proceed

in a disorderly and confusing fashion. An important problem which confronts researchers is how to begin meaningfully to synthesize a more coherent approach. One way is to consider together different elements of the same general perspective. In this chapter, the global concept has been defined as psychosocial. Within it major attention has been focused on impression management and the purposefulness of aberrant, especially schizophrenic, behavior. A major empirical contribution to modern interpersonal theory was also assessed. It is appropriate to consider these two spheres together to attempt (a) to resolve some of the remaining unanswered questions, (b) to evaluate further the pertinent theories, and (c) to refine our theoretical knowledge in the light of empirical results.

The design

The current study proceeds from the body of impression management-purposefulness research already assessed, and the Shimkunas contribution to contemporary interpersonal research. The experimental paradigm to be described evolves from both these perspectives with emphasis on evaluating the Shimkunas formulation of the disturbed interpersonal behavior of schizophrenics by introducing a more overt impression management-purposefulness dimension. A major criticism of the Shimkunas study, despite its focus on actual interpersonal behavior, was the absence of any clear personal investment for participating subjects.

The relative threat of a demand for intimate self-disclosure can be considered in the context of introducing a broader goal or purpose. In doing so, it remains worthwhile to retain to the fullest possible extent a similar design and methodology.

The study undertaken here allows both the fullest possible replication of Shimkunas' work, while permitting simultaneously a greater assessment of the role of impression management and the purposefulness of schizophrenic interpersonal behavior. The experiment utilizes three diagnostic groups, four disclosure conditions, and eight topics. The latter are considered in the Methods chapter. It was desirable to use paranoid schizophrenics, nonparanoid schizophrenics, and nonpsychotic controls for six reasons. One, it is important in assessing results and theory not to conceive of schizophrenics as an homogeneous whole. Two, these were the same diagnostic groups used by Shimkunas. Three, these groups have not been similarly considered in impression management research. Four, earlier impression management research does not mandate the absolute use of either a healthy vs. sick presenter or a process-reactive differentiation. Recent related research from an interpersonal perspective (e.g., Aronow, Reznikoff, & Tyron, 1975) similarly does not necessarily dictate using a process-reactive difference because of continued inconsistent results. Five, the paranoid-nonparanoid dichotomy has been recommended for further evaluation based in part on previous utility (e.g., Buss & Lang, 1965; Cash, 1973; Johannsen, 1964;

Silverman, 1964). Six, there is clear value in having a nonpsychotic control group for comparison purposes. Cash (1973), in considering methodological problems in schizophrenia research, strongly endorses the use of control groups. Failure to do so, he notes, delays isolating much of the behavior uniqueness of individuals labeled as schizophrenic, with the past result of this failure being to oversimplify greatly the basis for this peculiar behavior.

The disclosure conditions are based on the Shimkunas personal vs. impersonal demands with introduction of two goal-oriented personal demand conditions. These continue to utilize actual verbal, interpersonal behavior as dependent measures. Shimkunas clearly demonstrated the experimental utility of the personal vs. impersonal demand. They are replicated here in what are labeled as the Personal Demand-No Goal and Impersonal Demand-No Goal conditions. In addition, there are two Personal Demand-Goal conditions, derived in theory from some earlier impression management research (Braginsky et al., 1969; Fontana & Gessner, 1969; Sherman et al., 1974; Watson, 1972b). One Personal Demand-Goal condition utilized remaining on an Open Ward as a positive goal, while the other Personal Demand-Goal condition utilized Discharge as a negative goal. Earlier work had demonstrated the experimental manipulability of schizophrenic behavior using the Open Ward and Discharge concepts. A major problem for the current study was the construction and procedure of Personal Demand-Goal conditions which met

the combined exigencies of theoretical validity, the ethics of using human subjects, and informed consent. Theoretical validity has been established in earlier research with remaining on an Open Ward strongly indicated for use as a meaningful Positive Goal, while Discharge emerged inconsistently but, on balance, favorably for use as a Negative Goal. The issues involved from an ethical and informed consent requirement will be considered in the Methods chapter.

An experimental design has been described using three diagnostic groups, four disclosure conditions, and eight topics. This design permits the fullest replication of the Shimkunas study. It evaluates the relative threat of a demand for personal self-disclosure in a broader context--the presence or absence of personal investment in the experimental procedure. This is achieved through two Personal Demand-Goal conditions with a broader goal presented as part of the purpose of the experiment, one Personal Demand-No Goal condition in which no broader goal is presented, and an Impersonal Demand-No Goal condition to permit replication of the Shimkunas study.

Hypotheses

The study is concerned with investigating the grand hypothesis that schizophrenic behavior, as measured by psychopathological verbalizations in an interpersonal, "clinical" situation, can be modified in the context of greater personal investment in the interpersonal situation.

The grand hypothesis is operationally divided into three components: (1a) Schizophrenics confronted by a demand for personal self-disclosure in the context either of no broader goal or a negative goal (Discharge) will demonstrate more verbal psychopathology than nonpsychotics in the same situation; (1b) schizophrenics confronted by either a demand for impersonal self-disclosure or a demand for personal self-disclosure linked to a positive goal (remaining on an Open Ward) will not differ significantly from nonpsychotics in the same situation; (2) schizophrenics confronted by a demand for personal self-disclosure linked to a positive goal (remaining on an Open Ward) will demonstrate less verbal psychopathology than schizophrenics confronted by a demand for personal self-disclosure in the absence of a broader goal; and (3) schizophrenics confronted by a demand for personal self-disclosure linked to a negative goal (Discharge) will demonstrate more verbal psychopathology than schizophrenics confronted by a demand for personal self-disclosure in the absence of a broader goal.

These global hypotheses may now be considered according to each of the dependent measures.

Personal disclosure

1a. Paranoid and nonparanoid schizophrenics will be less disclosing than nonpsychotics in the Personal Demand-No Goal condition.

1b. Paranoid and nonparanoid schizophrenics will not differ

significantly from nonpsychotics in levels of disclosure in the Personal Demand-Open Ward condition.

1c. Paranoid and nonparanoid schizophrenics will be less disclosing than nonpsychotics in the Personal Demand-Discharge condition.

1d. Paranoid and nonparanoid schizophrenics will not differ significantly from nonpsychotics in levels of disclosure in the Impersonal Demand-No Goal condition.

Avoidance

1a. Paranoid schizophrenics will be more avoidant than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-No Goal condition.

1b. Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of avoidance in the Personal Demand-Open Ward condition.

1c. Paranoid schizophrenics will be more avoidant than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-Discharge condition.

1d. Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of avoidance in the Impersonal Demand-No Goal condition.

2. Paranoid schizophrenics in the Personal Demand-Open Ward condition will be less avoidant than paranoid schizophrenics in the

Personal Demand-No Goal condition.

3. Paranoid schizophrenics in the Personal Demand-Discharge condition will be more avoidant than paranoid schizophrenics in the Personal Demand-No Goal condition.

Suspiciousness

1a. Paranoid schizophrenics will be more suspicious than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-No Goal condition.

1b. Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of suspiciousness in the Personal Demand-Open Ward condition.

1c. Paranoid schizophrenics will be more suspicious than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-Discharge condition.

1d. Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of suspiciousness in the Impersonal Demand-No Goal condition.

2. Paranoid schizophrenics in the Personal Demand-Open Ward condition will be less suspicious than paranoid schizophrenics in the Personal Demand-No Goal condition.

3. Paranoid schizophrenics in the Personal Demand-Discharge condition will be more suspicious than paranoid schizophrenics in the Personal Demand-No Goal condition.

Delusional thinking

1a. Paranoid schizophrenics will be more delusional in thinking than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-No Goal condition.

1b. Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of delusion in thinking in the Personal Demand-Open Ward condition.

1c. Paranoid schizophrenics will be more delusional in thinking than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-Discharge condition.

1d. Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of delusion in thinking in the Impersonal Demand-No Goal condition.

2. Paranoid schizophrenics in the Personal Demand-Open Ward condition will be less delusional in thinking than paranoid schizophrenics in the Personal Demand-No Goal condition.

3. Paranoid schizophrenics in the Personal Demand-Discharge condition will be more delusional in thinking than paranoid schizophrenics in the Personal Demand-No Goal condition.

Autism

1a. Paranoid and nonparanoid schizophrenics will be more autistic than nonpsychotics in the Personal Demand-No Goal condition.

1b. Paranoid and nonparanoid schizophrenics will not differ significantly from nonpsychotics in levels of autism in the Personal Demand-Open Ward condition.

1c. Paranoid and nonparanoid schizophrenics will be more autistic than nonpsychotics in the Personal Demand-Discharge condition.

1d. Paranoid and nonparanoid schizophrenics will not differ significantly from nonpsychotics in levels of autism in the Impersonal Demand-No Goal condition.

2a. Paranoid schizophrenics in the Personal Demand-Open Ward condition will be less autistic than paranoid schizophrenics in the Personal Demand-No Goal condition.

2b. Nonparanoid schizophrenics in the Personal Demand-Open Ward condition will be less autistic than nonparanoid schizophrenics in the Personal Demand-No Goal condition.

3a. Paranoid schizophrenics in the Personal Demand-Discharge condition will be more autistic than paranoid schizophrenics in the Personal Demand-No Goal condition.

3b. Nonparanoid schizophrenics in the Personal Demand-Discharge condition will be more autistic than nonparanoid schizophrenics in the Personal Demand-No Goal condition.

Topics

No topic effects are predicted. They will, however, be considered in the data analysis.

CHAPTER II

METHODS

Location

Data collection for this study was undertaken at the William S. Hall Psychiatric Institute, Columbia, South Carolina, the training and research facility of the South Carolina Department of Mental Health. The Institute is located in an urban area with a metropolitan population of approximately 300,000 people. It attracts patients from throughout South Carolina and offers both inpatient and outpatient services for adolescents and adults, as well as outpatient and day-treatment services for children.

The adult inpatient section at Hall is composed of five units or wards in two buildings. One unit, the Neurology ward, was not utilized in the current study. The remaining four wards consisted of two female, one male, and one mixed ward, with a total bed capacity of 90 patients. The wards are composed of single, double, and quadruple bedrooms assigned according to therapeutic need. The physical surroundings are attractive and modern, with construction of the facility having been completed in the late 1960s. The physical environment, furnishings, and

general atmosphere approximate those of a private facility and are not what would stereotypically be expected in a public, state-run mental hospital. Because Hall is a state facility, patient fees are low--approximately $25 per day on an inpatient ward. Ability to pay is not a criterion for admission. Patients are primarily selected according to the training needs of the Institute. Consequently, the patient population represents a cross-section of diagnostic categories and socioeconomic backgrounds.

The therapeutic orientation emphasizes a short-term intensive treatment modality. Patient-staff ratio is low for all elements of professional staff. On the day and evening shifts there are typically two nurses and two to three clinical counselors per ward. Each ward has a senior staff psychiatrist permanently attached to it and two psychiatric residents on a rotating (three to six months) basis. There are three senior staff psychiatrists with primarily administrative responsibilities who also participate in the inpatient service. The Adult Inpatient Clinical Psychology section is composed of three senior staff Ph. D. psychologists and two interns on a rotating basis. There are two pastoral counselors, three recreational therapists, and four occupational therapists, as well as trainees in these disciplines who work regularly with adult inpatients. All staff components participate in regular ward teams where individual patient programs are developed and assessed.

Before any research project may be undertaken at the Institute, it must be evaluated and approved by the Institute Research Committee and

its Executive Committee. Accordingly, a Research Protocol (the complete Protocol is Appendix A) was submitted to these committees outlining the design, methods, and the specific informed consent procedure to be used. The project was approved on March 4, 1974, by the Research Committee with slight changes in the original informed consent form. Sanction from the Executive Committee was received on March 5, 1974. Data collection began on March 18, 1974, and was completed on September 3, 1974.

Subjects

A total of 233 patients were assessed for this study. Eighty-two subjects were rejected prior to the time they would have been run because they did not meet the diagnostic criteria; 18 subjects were rejected subsequent to their participation because their diagnosis was changed at the time of staffing. Six subjects who met all criteria were lost because of mechanical failure. Sixteen subjects refused to agree to participate in the study; of these 16 subjects, 15 would not sign the informed consent form and one subject withdrew her consent during the procedure. One hundred eleven subjects met all criteria, of whom 96 were used in the data analysis because the remaining 15 subjects were not equally divided across cells. More subjects were run than necessary because of the uncertainties occasioned by the recheck on diagnoses. The extras were used as practice tapes for Rater training sessions. Table 1 provides a breakdown on this information by ward and diagnosis.

Table 1

Subject Pool by Ward and Utilization

	Prior Reject	Refused			Run	Post Reject	Mech. Fail.	Acceptable			Final Sample		
		PS	NPS	Non-Psy				PS	NPS	Non-Psy	PS	NPS	Non-Psy
Village	28	1	1	1	28	6	2	11	2	7	9	2	4
Dix East	18	2	1	1	44	6	0	11	13	14	9	13	13
Taylor East	22	3	1	2	30	2	0	8	12	8	8	12	7
Taylor West	14	2	0	1	33	4	4	6	7	12	6	5	8
Total	82	8	3	5	135	18	6	36	34	41	32	32	32

Diagnosis

The subjects in this study were composed of three diagnostic groups: "Paranoid Schizophrenics," "Nonparanoid Schizophrenics," and "Nonpsychotics." There were 32 subjects in each category for a total of 96 subjects. Subjects were initially selected by a review of their charts and their primary diagnosis according to DSM-II (1968) standards. Several criteria were assessed. Patients with organic brain syndromes, or carrying a primary diagnosis of alcoholism, drug addiction, or manic-depressive psychosis, were automatically eliminated. Specific operational definitions were established for each experimental diagnostic category:

Paranoid Schizophrenics carried a primary diagnosis of schizophrenia. Current chart notes had to indicate the presence of delusions of grandeur, persecution, reference, or control. It was expected that most patients demonstrating such symptomatology would be formally labeled as paranoid schizophrenics (Table 2 provides a complete breakdown by primary diagnosis for each category).

Nonparanoid Schizophrenics carried a primary diagnosis of schizophrenia with no indications of a paranoid orientation as established by the criteria for the paranoid schizophrenic group.

Nonpsychotics were composed of three DSM-II groups--neurotic, personality disorder, and adjustment reaction diagnoses. Any patient currently carrying such a diagnosis who had at any time been previously

Table 2

Final DSM-II Diagnoses within Each Diagnostic Category

DSM-II No.	Label	N Acceptable	N Final Sample
Paranoid Schizophrenics			
295.30	Schizophrenia, paranoid type	24	20
295.90	Schizophrenia, chronic undifferentiated type	8	8
295.40	Acute Schizophrenic Episode	2	2
295.00	Schizophrenia, simple type	2	2
		36	32
Nonparanoid Schizophrenics			
295.90	Schizophrenia, chronic undifferentiated type	13	12
295.70	Schizophrenia, schizo-affective type	7	6
295.50	Schizophrenia, latent type	4	4
295.74	Schizophrenia, schizo-affective type, depressed	3	3
295.40	Acute Schizophrenic Episode	3	3
295.00	Schizophrenia, simple type	2	2
295.73	Schizophrenia, schizo-affective type, excited	1	1
295.24	Schizophrenia, catatonic type, withdrawn	1	1
		34	32
Nonpsychotics			
300.40	Depressive neurosis	16	13
300.00	Anxiety neurosis	3	3
301.50	Hysterical personality	3	3
301.20	Schizoid personality	2	2
301.81	Passive-aggressive personality	3	2
307.20	Adjustment reaction of adolescence	5	2

Table 2 (continued)

DSM-II No.	Label	N Acceptable	Final Sample
300.13	Hysterical neurosis, conversion type	1	1
300.20	Phobic neurosis	1	1
300.30	Obsessive compulsive neurosis	1	0
301.00	Paranoid personality	1	0
301.10	Cyclothymic personality	1	1
301.30	Explosive personality	1	1
301.40	Obsessive compulsive personality	1	1
301.70	Antisocial personality	1	1
307.30	Adjustment reaction of adult life	1	1
		41	32

diagnosed as schizophrenic was eliminated.

When the chart was first reviewed the diagnoses were those appearing in the formal psychiatric evaluation placed in the patient's chart soon after admission by the psychiatric resident covering the case and co-signed by a senior staff psychiatrist. It was on the basis of this working diagnosis that initial subject selection was made and subjects run. However, it was desirable to tighten this procedure as far as possible. Each patient received a formal staffing within 30 days of admission when the patient was presented to one or more senior staff psychiatrists and possibly other mental health professionals. After this "staffing," subjects' diagnoses were again checked. If their diagnosis had been changed in a manner that would have resulted in prior rejection if the new diagnosis had been made earlier, subjects who had already been run were dropped.

Demographic characteristics

Inasmuch as previous research has generally failed to indicate the relevance of demographic variables on impression management, it is still methodologically desirable to create comparable groups to the fullest possible extent. Jourard (1964, 1971) has found some demographic variables, e.g., sex and age, to affect self-disclosure. Thus, it was further worthwhile to control for these variables. To that end, eight demographic characteristics were isolated for the purpose of control: Age, Sex, Race, Education, Number of Psychiatric Hospitalizations,

Months since First Hospitalization, Days of Current Hospitalization, and I.Q. All these data except I.Q. were available from patients' charts and were obtained during the original screening. Charts were rechecked at a later time if some of the data were initially missing.

I.Q. was established by administering the Vocabulary subtest of the Wechsler Adult Intelligence Scale (Wechsler, 1955) to subjects as part of the procedure. This enabled screening out of subjects with mental deficiency (I.Q. < 70), as well as permitting an evaluation across groups on this variable. The WAIS Vocabulary subtest was used as the I.Q. measure for three reasons: (a) Dependent measures were based on subjects' verbal performance; (b) it is the same measure used by Shimkunas (1972); and (c) previous support existed demonstrating that vocabulary is the most sensitive of all the WAIS subtests to the intellectual impairment of schizophrenics (Rabin, King, & Ehrmann, 1955; Rappaport & Webb, 1950).

Sex balance was achieved with a ratio of either five females and three males or four females and four males in all cells. Table 3 presents cell distributions. By diagnostic groups, there were 18 females and 14 males in all categories.

Race was not as evenly distributed. There were totals of 19 Negroes and 77 Caucasians. The number of Negroes in any single cell ranged from zero to four. Table 4 presents cell distributions. By diagnostic categories there were 11 Negroes and 21 Caucasians in the

Table 3

Sex Distribution within Cells--Condition by Diagnosis

		PS	NPS	NonPsy
PNG	F	5	5	5
	M	3	3	3
POW	F	4	4	4
	M	4	4	4
PDS	F	4	4	4
	M	4	4	4
ING	F	5	5	5
	M	3	3	3

Abbreviations:

PS - Paranoid Schizophrenic
NPS - Nonparanoid Schizophrenic
NonPsy - Nonpsychotic
PNG - Personal Demand - No Goal
POW - Personal Demand - Open Ward
PDS - Personal Demand - Discharge
ING - Impersonal Demand - No Goal
F - Female
M - Male

Table 4

Race Distribution within Cells--Condition by Diagnosis

		PS	NPS	NonPsy
PNG	N	4	3	1
	C	4	5	7
POW	N	3	0	0
	C	5	8	8
PDS	N	2	1	0
	C	6	7	8
ING	N	2	1	1
	C	6	7	7

Abbreviations:

N - Negro
C - Caucasian

Paranoid Schizophrenic group, 5 Negroes and 27 Caucasians in the Nonparanoid Schizophrenic group, and 2 Negroes and 30 Caucasians in the Nonpsychotic group. Thus, Negroes were overrepresented in the Paranoid Schizophrenic group. There is nothing in the impression management literature to suggest that race is an influential factor. Jourard (1964), however, found that Negroes were less self-disclosing than Caucasians. Therefore, race could be a confounding influence on the Self-Disclosure dependent measure and will be examined further in presenting and discussing the results on this measure.

Data on the remaining six characteristics (Age, Education, Number of Psychiatric Hospitalizations, Months since First Hospitalization, Days of Current Hospitalization, and I.Q.) are presented in Tables 5-10. One-way analyses of variance (for Diagnosis within Condition and Condition within Diagnosis) of those data revealed no significant differences at the $p = .05$ level. Appendix H (Tables 61-102) contains these ANOVA results. It may be assumed, therefore, that experimental groups in this study were highly comparable.

In-hospital characteristics

All subjects were on active treatment wards in the same facility. Three wards (two female, one male) were virtually identical to each other in every respect, while the fourth ward (males and females) was in a separate building immediately adjacent to the main building containing the other adult wards. All wards were similarly furnished and equipped.

Table 5

Age (in Years) within Cells--Condition by Diagnosis

		PS	NPS	NonPsy
PNG	$\overline{X}$	31.5	30.6	30.6
	SD	(13.4)	(12.6)	(10.9)
POW	$\overline{X}$	29.5	27.0	31.6
	SD	(13.8)	(8.2)	(12.5)
PDS	$\overline{X}$	28.3	27.4	29.1
	SD	(4.4)	(10.9)	(8.1)
ING	$\overline{X}$	31.9	24.5	33.3
	SD	(10.3)	(4.0)	(14.5)

Population $\overline{X}$ = 29.6 (SD = 10.5)

Table 6

Education (in Years) within Cells--Condition by Diagnosis

		PS	NPS	NonPsy
PNG	$\overline{X}$	11.8	13.3	11.3
	SD	(2.8)	(1.8)	(3.1)
POW	$\overline{X}$	11.6	11.0	10.8
	SD	(1.1)	(3.5)	(3.9)
PDS	$\overline{X}$	10.8	13.0	12.4
	SD	(2.7)	(2.3)	(3.8)
ING	$\overline{X}$	11.3	12.3	10.8
	SD	(2.0)	(0.7)	(3.1)

Population $\overline{X}$ = 11.7 (SD = 2.7)

Table 7

Number of Psychiatric Hospitalizations within Cells--Condition by Diagnosis

		PS	NPS	NonPsy
PNG	$\bar{X}$	4.8	2.9	2.3
	SD	(3.0)	(1.0)	(2.8)
POW	$\bar{X}$	2.0	5.4	1.8
	SD	(1.5)	(5.9)	(1.2)
PDS	$\bar{X}$	3.4	2.8	1.5
	SD	(2.8)	(2.3)	(0.8)
ING	$\bar{X}$	2.5	3.0	1.6
	SD	(0.9)	(1.4)	(1.1)

Population $\bar{X}$ = 2.8 (SD = 2.6)

Table 8

Months since First Hospitalization within Cells--Condition by Diagnosis

		PS	NPS	NonPsy
PNG	$\bar{X}$	79.5	27.0	18.9
	SD	(90.4)	(31.5)	(49.0)
POW	$\bar{X}$	13.0	52.8	7.5
	SD	(23.7)	(73.8)	(10.1)
PDS	$\bar{X}$	24.1	28.4	5.9
	SD	(31.2)	(45.0)	(13.4)
ING	$\bar{X}$	48.6	24.4	51.0
	SD	(46.3)	(25.6)	(77.2)

Population $\bar{X}$ = 31.8 (SD = 51.3)

Table 9

Days of Current Hospitalization within Cells--Condition by Diagnosis[a]

		PS	NPS	NonPsy
PNG	$\overline{X}$	16.0	16.8	15.3
	SD	(16.5)	(13.0)	(10.2)
POW	$\overline{X}$	16.8	14.6	15.8
	SD	(13.0)	(13.4)	(12.9)
PDS	$\overline{X}$	17.3	16.5	14.8
	SD	(17.5)	(11.4)	(5.1)
ING	$\overline{X}$	14.1	14.4	16.6
	SD	(12.3)	(5.9)	(18.3)
		Population $\overline{X}$ = 15.7 (SD = 12.3)		

[a] At time of participation in study.

Table 10

IQ within Cells--Condition by Diagnosis

		PS	NPS	NonPsy
PNG	$\overline{X}$	102.8	108.0	100.9
	SD	(22.8)	(25.9)	(12.6)
POW	$\overline{X}$	90.5	99.0	96.6
	SD	(11.7)	(17.2)	(15.6)
PDS	$\overline{X}$	88.5	99.6	99.3
	SD	(15.3)	(11.2)	(19.1)
ING	$\overline{X}$	89.6	99.6	99.4
	SD	(10.3)	(12.1)	(19.8)
		Population $\overline{X}$ = 97.8 (SD = 16.7)		

The therapeutic regime was essentially similar, although the mixed-sex ward was characterized as a pilot project for the South Carolina Department of Mental Health. It placed greater emphasis on group process than the other wards. However, other therapeutic aspects, including staff-patient ratio, were similar.

Shimkunas (1972) noted that individual psychotherapy was an extremely uncommon experience for patients in the facility from which he drew his subjects. He also suggested that nonpsychotic patients may be more amenable to psychotherapy and thus more likely to obtain it, which could foster greater self-disclosure behavior. Consequently, subjects' charts were also screened to determine whether psychotherapy was part of their therapeutic regime. Fifty-three, or approximately one-half of the subjects, were receiving some form of individual psychotherapy. There was a relatively similar balance in all diagnostic categories with nonpsychotics somewhat more likely to be in psychotherapy: 16 paranoid schizophrenics, 17 nonparanoid schizophrenics, and 21 nonpsychotics. Table 11 presents a complete breakdown. It must be emphasized that the frequency and form of psychotherapy varied enormously, making this a very difficult process to evaluate. It is mentioned here to present the fullest possible profile of subject characteristics. Psychotherapy could be with a permanent staff pastoral counselor, psychiatrist, psychologist, or social worker, or more likely with a pastoral counseling trainee, psychiatric resident, psychology intern, or social work trainee. There

Table 11

Number of Patients Whose Charts Indicated Individual Therapy as Part of Their Therapeutic Regime within Cells--Condition by Diagnosis

		PS	NPS	NonPsy
PNG	Y	2	4	6
	N	6	4	2
POW	Y	6	8	7
	N	2	0	1
PDS	Y	2	3	5
	N	6	5	3
ING	Y	6	2	5
	N	2	6	3

Abbreviations:

Y - Yes (individual therapy indicated on chart)
N - No (individual therapy not indicated on chart)

was no common psychotherapeutic philosophy within or across disciplines, and the nature and intensity of supervision varied as well. It can also be stressed that this is essentially no different from virtually all psychiatric facilities, and that the quality of psychotherapy at Hall is probably as good or better than that available at comparable facilities. However, it occurs in less than a satisfactorily systematic fashion. In addition, what was characterized as psychotherapy in some patients' charts may simply have been considered routine contact for other patients, particularly among psychiatric residents who had the management responsibilities for patients. Consequently, the presence or absence of individual psychotherapy in a subject's therapeutic program itself is most unlikely to have influenced their behavior in this study.

The use of chemotherapy has also been suggested as potentially playing a role in schizophrenia research (e.g., Cash, 1973). The use of drug treatment among subjects in this study was very similar to that in Shimkunas' (1972) research. Most schizophrenics were receiving phenothiazines or another "antipsychotic" agent either alone or in combination with other psychotropic medication. Most nonpsychotics were on minor tranquilizers or antidepressants, either alone or in combination with other psychotropic medication. Table 12 presents a breakdown by diagnosis, condition, and type of drug. Shimkunas (1972) noted that the use of phenothiazines may actually have made his design more rigorous, since phenothiazines had been shown to decrease markedly errors of

Table 12

Type of Psychotropic Medication within Cells--
Condition by Diagnosis

		Phenothiazines	Other Antipsychotic	Antidepressants	Minor	None
PNG	PS	8	0	0	0	0
	NPS	7	1	1	2	1
	NonPsy	3	0	2	4	1
POW	PS	6	1	0	0	1
	NPS	7	0	0	1	1
	NonPsy	2	0	2	1	4
PDS	PS	8	0	0	1	0
	NPS	4	1	1	2	1
	NonPsy	2	0	2	3	3
ING	PS	7	0	0	0	1
	NPS	7	0	0	1	0
	NonPsy	2	0	2	4	3
Total	PS	29	1	0	1	2
	NPS	21	2	2	6	3
	NonPsy	9	0	8	12	11

overinclusion (Chapman & Knowles, 1964), a major form of idiosyncratic conceptualization. Shimkunas, Gynther, and Smith (1967) also demonstrated that more general indications of autistic thinking have also dropped markedly over long periods of phenothiazine treatment. Since the use of phenothiazines and other "antipsychotic" agents was essentially the same in all schizophrenic cells, it is unlikely to have had any differential effect among these cells. If it had any effect it should have been in the direction of less autism than more, but the manner in which phenothiazine use was distributed among subjects makes any inter-cell differences on this basis unlikely.

On the basis of all the demographic and in-hospital data, it can be stated that diagnostic and condition groups were comparable and permit an adequate assessment of the dependent variables in the context of the outlined experimental design.

Time

One further variable remains to be assessed to establish comparability across diagnostic groups and conditions. Following Shimkunas (1972), mean length of total response time for comparing the three diagnostic groups within each condition was analyzed. Table 13 summarizes these data. Analysis of variance revealed no significant differences (Appendix H, Tables 103-106, presents the ANOVA results).

The total response time in the current study was consistently

Table 13

Total Response Time (in Seconds) within Cells--
Condition by Diagnosis

		PS	NPS	NonPsy
PNG	$\bar{X}$	903.3	742.1	756.6
	SD	632.9	302.6	520.6
POW	$\bar{X}$	812.6	866.6	929.8
	SD	503.6	695.1	612.5
PDS	$\bar{X}$	781.4	829.0	714.9
	SD	497.8	584.5	443.8
ING	$\bar{X}$	903.8	510.5	484.1
	SD	812.3	365.1	291.5

Population $\bar{X}$ = 769.6 (SD = 529.2)

Table 14

Total Response Time (in Seconds) within Cells--
Condition by Diagnosis (Shimkunas, 1972)

		PS	NPS	NonPsy
PNG	$\bar{X}$	663.9	691.1	696.9
ING	$\bar{X}$	503.7	394.2	437.2

Population $\bar{X}$ = 564.5

greater than in the earlier Shimkunas (1972) work. Table 14 presents the Shimkunas data on this variable. Mean length of total response time for all subjects in the current study was 769.55 seconds compared to 564.50 seconds for Shimkunas. The greater verbalness of subjects in this study may be due to the greater diversity of socioeconomic groups at Hall Institute than at the facility from which Shimkunas drew his subjects. Inasmuch as length of time spoken was not a rating criterion, it is not viewed as affecting the results. Rather, the main value of examining this variable was to ascertain that diagnostic groups behaved comparably in verbal output in each of the four conditions, which has been demonstrated.

Procedure

Setting and personnel

After subjects' charts had been screened and their appropriateness for the study ascertained, they were scheduled for an interview with the experimenter, who was always blind to patient diagnosis. The experimenter did not have any knowledge of the experimental design and did not participate in any aspect of subject selection. Furthermore, her primary duties as a Research Resource Associate were in the Child and Adolescent service in another building where she had her usual office, minimizing the amount of regular contact she had with adult inpatients. The experimenter had a Master's degree in Clinical Psychology and

several years' experience working with adult inpatients in a state hospital prior to assuming her present position. Thus, she was familiar with adult psychiatric inpatients and in all respects eminently well qualified to serve as experimenter for this study.

Subjects were always seen in the same office of the main building. Constancy of the physical environment in which subjects were tested was maintained to avoid an extraneous effect which may have influenced results in other studies (e.g., Adler & Harrow, 1974). Subjects' appointments were scheduled with the ward secretary. Ward staff had ultimate veto power to keep a patient on the ward if they felt leaving the ward at that time was not in the subject's best interest. This was an extremely rare occurrence. When this happened ward staff would usually offer to make a ward office available, but this offer was never accepted, so as to maintain environmental constancy for all subjects.

Ward staff were always most helpful in scheduling and supportive of the study. Scheduling and chart screening were done by the primary investigator, who consequently became a familiar figure on all four wards. The cooperation of ward staff and an appreciation of their role are viewed as essential to any research effort with psychiatric inpatients.

Informed consent

An important element of the procedure was to secure subjects' informed consent. This was any patient's first exposure to the study.

An informed consent statement was devised and presented to the Research Committee of the William S. Hall Psychiatric Institute when permission to undertake the project at Hall was requested. The Committee made only very minor changes in the form (Appendix B is the Informed Consent Form used in the study). The form was constructed to give patients a clear idea that the procedure involved an interview without revealing the experimental conditions themselves. In addition, it clearly did not promise immediate direct benefit for participation. This is considered an essential element of informed consent when it is actually the case. It had important implications for the disclosure conditions discussed below.

The standard method of securing patients' informed consent was to present the Consent Form to all patients at the time of admission by the Admissions Officer. If, for some reason, this did not occur, a member of the patient's ward staff or the primary investigator presented the Consent Form to a patient. This procedure minimized singling out individual patients and was normal in the context of Hall Institute's role as the training and research facility of the South Carolina Department of Mental Health. Thus, informed consent was usually secured for all patients at time of admission; only later were all charts screened to determine appropriateness for inclusion in the study, and appointments made. Fifteen subjects who met the criteria of the study refused to sign Consent Forms. These subjects were never tested. No pressure or coercion nor any penalty was imposed on any subject for refusal to sign the Consent

Form, nor on the only subject who withdrew consent during the experiment itself. (Table 1, p. 61, contains the diagnostic and ward characteristics of these subjects.)

The interview

Subjects were seated across the desk from the experimenter. On the desk were two tape recorders. The experimenter first administered the Vocabulary subtest of the Wechsler Adult Intelligence Scale (WAIS; Wechsler, 1955). This provided the prorated I.Q. measure to control for intelligence, and additionally helped to establish rapport with the subject. Following this, each subject was read the instructions corresponding to his condition. The three instruction statements are contained in Appendix C and are described more fully in presenting goal and disclosure conditions. These instructions outlined the procedure for subjects and contained the Open Ward-Discharge-No Goal manipulation. Following these instructions, the experimenter presented the eight tape-recorded disclosure statements, either Personal or Impersonal, one at a time, after each of which the subject made his/her comments on that topic. The procedure as outlined in the instructions was repeated for all eight topics. Appendix D presents the Stimulus Disclosure statements.

Goal and Disclosure Conditions

Two variables were manipulated experimentally in the Procedure: the presence or absence of a broader goal and demand for personal or

impersonal self-disclosure.

Goal conditions

Manipulation of the goal condition was achieved by varying the first part of the instructions presented by the experimenter to the subject. Appendix C contains the three sets of instructions. In the Personal Demand-No Goal and Impersonal Demand-No Goal conditions, the instructions were identical to each other and exactly as used in the Shimkunas (1972) study. In the Personal Demand-Open Ward and Personal Demand-Discharge conditions, the stated purpose of the study was broadened. In the No Goal conditions, the stated purpose was simply to "study different ways of interviewing people." Thus, subjects were presented with no reason for becoming personally invested in the task, although, as noted on the Consent Form, they could "take satisfaction in realizing he/she is contributing to a scientific study." In the Goal conditions, subjects were further told that the experimenter was "interested in determining your ability to remain on an Open Ward," or "in determining whether you are ready for discharge and a return to the community." Subjects in these conditions were provided with a personal purpose for participating and thus with a clear invitation to engage in impression management. The remainder of the instruction presentation was the same in all conditions.

The ethics of doing research with psychiatric inpatients required that the Goal conditions be presented in a truthful manner even though

doing so risked diminishing the potency of the manipulation. Thus, subjects were told first that the experimenter was only interested in assessing their ability to remain on an Open Ward or their readiness for discharge. In addition, subjects in both these conditions were then told, "I am doing this in the context of my own research. However, I shall give my recommendations and a full report to your doctor." In order to be ethical and yet retain a strong manipulation, subjects were told that the experimenter had no direct power with regard to staying on an Open Ward or being Discharged, although the experimenter then conveyed that she had indirect power via her recommendations to the subjects' doctor. It is felt that this manner of presentation retained sufficient credibility to be considered a strong manipulation for the theoretical reasons outlined earlier.

It is reasonable to consider the meaning of remaining on an open ward or of being discharged from the facility from which subjects were taken. First, with regard to discharge, the Institute was a short-term facility with mean length of stay ranging from 30 to 90 days, depending on the presenting symptomatology, and course in the hospital. No patient ever became a chronic care patient. Thus, the ultimate reality of discharge from the Institute existed for all patients. Second, every effort was made to interview subjects between their seventh and twentieth day of hospitalization. In the Discharge condition, 22 of the 24 subjects were interviewed in this period: seven of the eight paranoid

schizophrenics, seven of the eight nonparanoid schizophrenics, and all eight nonpsychotics. Table 9 (p. 71) presented data on Days of Current Hospitalization for all subjects. One-way analyses of variance on these data revealed no differences. The ANOVA results are presented in Appendix H (Tables 89-95). This allowed sufficient time for patients to have become acclimatized to the hospital, but prior to the point when firm discharge plans would have been established. Third, the physical and environmental characteristics of the Institute were comfortable, making it as appealing as an institution can be. Even for patients accustomed to pleasant surroundings, the accommodations and atmosphere of the Institute were typically acceptable. Thus, at Hall Institute the physical environment was attractive, yet discharge an ultimate reality for all patients. In the study itself, subjects were interviewed at a time when it was most unlikely that their own discharge plans had been made.

The meaningfulness of using an "Open Ward" manipulation can also be demonstrated. First, all four adult wards were managed as open wards where patients moved through several steps ranging from ward restriction, to being able to sign off the ward at will and leave unaccompanied by staff or another patient. Great emphasis was placed on personal responsibility. Second, when the extreme behavior of an individual patient required that the actual doors to the ward be locked, this in no way interfered with other patients leaving the ward freely, except that a staff member had to unlock the door to let them on or off the ward. Since ward

staff-patient ratio was low, this presented no problem. Third, patients made regular "off campus" outings usually at least twice a week for recreational, educational, or shopping purposes. Fourth, while there were no "locked wards" at Hall, the Institute was located only several hundred yards from the state hospital. Patients were transferred between both institutions, which was commonly known among patients. The manipulation of "assessing ability to remain on an open ward" at Hall was therefore enhanced both by the characteristics prevailing at Hall and its proximity to the state hospital. For ethical reasons, it was deemed inappropriate actually to threaten patients with transfer to the state hospital, although this would have strengthened the manipulation even further. In an era when historic imbalances are being redressed and patients' rights not only affirmed but secured through institutional safeguards, researchers must determine the minimum effective threat to subjects necessary and appropriate to test their hypotheses, rather than simply creating the most powerful manipulation for its own sake.

Disclosure conditions

Manipulation of the personal and impersonal demand for self-disclosure conditions was effected by the experimenter's modeling either (a) a personal and intimate or (b) an impersonal and superficial disclosure of her feelings and experiences on the eight topics. Appendix D contains the disclosure statements. Following the Vocabulary subtest of

the WAIS and presentation of the instructions, the experimenter then played her tape-recorded statement on each of the eight topics. The subject made his comments on each topic immediately after the experimenter's taped comments for that topic.

The eight topics were: Depending on People, Getting Angry at People, Helping Other People, Love, Being Good at Things, Being Rejected by People, Feeling Guilty, and The Future. The disclosure statements for the eight topics in both conditions were constructed by Shimkunas (1972). Appendix E details the construction of the statements presented by Shimkunas.

Response Measures

Response measures were five seven-point rating scales to score subjects' verbal responses to the experimenter's stimulus disclosures. The response measures are labeled (1) Personal Disclosure, (2) Avoidance, (3) Suspiciousness, (4) Delusional Thinking, and (5) Autism. The rating scale for the personal disclosure measure was a condensed version of that used by Doster and Strickland (1971) as revised by Shimkunas (1972). The other four scales were developed by Shimkunas (1972). For the current study, the scales were adopted with only a few minor modifications in wording. Appendix F contains the Rating Manual and Appendix G a sample rating form. Brief descriptions of these scales as defined by Shimkunas (1972) follow:

> (a) Personal Disclosure ranged from total absence of personal involvement and a superficial evaluation of the topic (0-point rating) to an intimate and searching focus on self, including exploration of inner thoughts and feelings and their free and open expression (6-point rating).
>
> (b) Avoidance ranged from direct and comprehensive focus, without wandering away from the topic under discussion (0-point rating) to a total refusal to comment, directly changing the subject, dismissing central issues, and dealing with some minor aspect of the stimulus disclosure (6-point rating).
>
> (c) Suspiciousness ranged from complete trust and eagerness to discuss that topic (0-point rating) to extreme guardedness, suspiciousness, questioning of the intent of the experimenter or the hospital regarding the interview (6-point rating).
>
> (d) Delusional thinking ranged from lack of delusions and paranoid ideation, with responses reflecting general satisfaction about others' treatment of him (0-point rating) to constant reference to plots to do him in, control him, beliefs that he is an important person (6-point rating).
>
> (e) Autism ranged from total lack of peculiar or illogical thinking; public, consensually valid and objective ideas (0-point rating) to bizarre and autistic concepts, illogical and tangential associations, and thought sequences virtually impossible to understand (6-point rating).
>
> The descriptions of each point (i.e., 0 through 6) on each rating scale were comprehensive, giving a trained rater sufficient basis on which to judge a response. The manual instructed the rater to make his judgments on an entire response rather than on any segment of it. For purposes of judging responses, rating scales were assumed to be uncorrelated. Thus each response was rated on each of the five dimensions independently (e.g., high ratings on autism and personal disclosure were possible). Such a procedure permitted responses to be categorized without the influence of theoretical bias, which, for example, would suggest that autism and personal disclosure are mutually exclusive. (p. 200)

Interrater reliability had been established by Shimkunas (1972) for his study using three raters--himself and two advanced graduate students in clinical psychology. Interrater agreement by each pair of raters produced artificially reduced correlation coefficients on two of the scales (suspiciousness and delusional thinking). Consequently, in determining

agreement between two raters, agreement was considered to exist whenever two raters judged a response within one scale value. This degree of latitude was considered reasonable inasmuch as it was slightly less than an ideal level of agreement. Table 15 presents Shimkunas' Percentages of Agreement among Pairs of Raters. This procedure was considered to be appropriate for the current study. Inasmuch as Shimkunas had already demonstrated the instrument's reliability, the procedure was repeated as a further methodological control. It produced extremely high interrater reliability both in the Shimkunas and the current study.

After all subjects had been run, several training sessions with the primary investigator and two other raters were held to work out problems in using the rating scales. The two other raters were advanced Ph. D. -level graduate students in clinical psychology, each of whom already had more than four years of experience with psychiatric inpatients and were well qualified to serve as judges of the interview responses. By sex the raters were two males and one female and by race, two Caucasians and one Negro.

Interrater reliability was established on a sample of 24 tapes or one-fourth of the total sample. All tapes had been recoded by a person other than the primary investigator or the other raters. This person also randomly selected the first 12 tapes used to establish interrater reliability. The other two raters were not familiar with the experimental design, and were kept blind to the subjects' Diagnosis and Goal-Demand

Table 15

Percentages of Agreement (within One) among Pairs of Raters for Interview Response Rating Scales Achieved by Shimkunas (1972)

Rating Scale	Rater 1 vs. Rater 2	Rater 1 vs. Rater 3	Rater 2 vs. Rater 3
Personal Disclosure	97	95	94
Avoidance	93	92	96
Suspiciousness	99	99	99
Delusional Thinking	96	98	97
Autism	91	93	90

conditions. The primary investigator was also kept blind to the subjects' Diagnosis and Goal-Demand conditions by the recoding process. Each rated the tapes independently and individually. Interrater reliability was established in two parts. The first 12 randomly selected tapes were rated by all raters. Interrater reliability was very high (.79 to .99), and the primary investigator then rated all of the remaining tapes. The original procedure then called for the other two raters to rate the last 12 tapes both as a further check on interrater reliability and on the consistency of the primary investigator's ratings. Unfortunately, Rater 2, for reasons having nothing to do with the study, was unavailable for the second set of ratings. However, strong interrater reliability between Raters 1 and 3 was maintained, confirming both the reliability of the instrument and the primary investigator's ratings. Tables 16-19 provide the percentages of agreement for both perfect and within-one-point agreements on both sets of ratings.

The ratings of the primary investigator (Rater 3) were used in the analyses of the results. His ratings were very consistent with other raters who were ignorant of the design as well as blind to Diagnosis and Goal-Demand condition. In addition, the interrater agreement obtained here was consistent with the high agreement obtained in the earlier Shimkunas study, where the primary investigator's ratings were also used for main data analysis.

Table 16

Percentages of Agreement (within One) among Pairs of Raters for Interview Response Rating Scales--12 Randomly Selected Tapes Only

Rating Scale	Rater 1 vs. Rater 2	Rater 1 vs. Rater 3	Rater 2 vs. Rater 3
Personal Disclosure	96	98	97
Avoidance	82	88	79
Suspiciousness	93	92	99
Delusional Thinking	93	95	97
Autism	93	96	99

Table 17

Percentages of Agreement (Perfect) among Pairs of Raters for Interview Response Rating Scales--12 Randomly Selected Tapes Only

Rating Scale	Rater 1 vs. Rater 2	Rater 1 vs. Rater 3	Rater 2 vs. Rater 3
Personal Disclosure	54	59	50
Avoidance	63	48	50
Suspiciousness	74	83	85
Delusional Thinking	83	75	72
Autism	81	78	73

Table 18

Percentages of Agreement (within One) between Raters for Interview Response Rating Scales--Last 12 Tapes Only

Rating Scale	Rater 1 vs. Rater 3
Personal Disclosure	97
Avoidance	95
Suspiciousness	97
Delusional Thinking	100
Autism	94

Table 19

Percentages of Agreement (Perfect) between Raters for Interview Response Rating Scales--Last 12 Tapes Only

Rating Scale	Rater 1 vs. Rater 3
Personal Disclosure	54
Avoidance	59
Suspiciousness	67
Delusional Thinking	78
Autism	56

CHAPTER III

RESULTS

Subjects' interview response ratings were analyzed by 3 x 4 x 8 ANOVAs (three diagnostic groups, four goal-demand conditions, eight topics). Shimkunas (1972) did not analyze his data for Topic effects, leaving questions about whether topic influenced the results. A more thorough consideration of the data requires that Topic be considered. Thus, the data used in the analyses of interview response ratings were the scores for each topic on each rating scale. Since each rating ranged from 0 to 6, this was the possible range of scores on a given topic for each rating scale. For the sake of completeness, Appendix H, Tables 107-111, contains the ANOVA results of a 3 x 4 analysis in which the ratings across all eight topics were summed. This emerged as a less sensitive test, and the data presented here are based on the three factor ANOVAs.

The findings will be presented according to each dependent measure and its hypotheses. The specific hypotheses made for each dependent measure requiring individual comparisons will be assessed by _t_-test analyses. The use of a three-factor design, as well as hypotheses

concerned with similar as well as different behavior across groups, indicated the appropriateness of this statistic. One-tailed tests were performed when directionality was predicted, while two-tailed significance was utilized to assess hypotheses where no differences were predicted or for differences in the reverse direction from that predicted. All analyses stemming from a given dependent measure will be presented together. After the findings of all the dependent measures have been presented in the context of the design of the current study, consideration will be given to the replication portion of the earlier Shimkunas work therein contained.

Personal disclosure

Analysis of variance of Personal Disclosure ratings revealed significant main effects for Diagnosis ($F = 8.308$, $df = 2/672$, $p < .001$) and Goal-Demand conditions ($F = 4.725$, $df = 3/672$, $p < .005$), as well as a Diagnosis x Goal-Demand condition interaction ($F = 2.836$, $df = 6/672$, $p < .01$). There was no main effect for Topic, nor were there any other significant interactions. Table 20 summarizes these ANOVA results.

Table 21 presents means for Diagnosis, Goal-Demand conditions and Topics. Paranoid schizophrenics were least disclosing while non-psychotics were most disclosing. These differences were in the expected direction. Subjects were most disclosing in the Personal Demand-No Goal condition and least in the Impersonal Demand-No Goal condition, with

Table 20

Summary of Three Factor ANOVA--Personal Disclosure

Source	df	SS	MS	F	p
Dx	2	22.424	11.212	8.308	< .001
Cond	3	19.128	6.376	4.725	< .005
Topic	7	10.342	1.477	1.095	n.s.
Dx x Cond	6	22.960	3.826	2.836	< .01
Dx x Topic	14	8.825	0.630	< 1	n.s.
Cond x Topic	21	11.069	0.527	< 1	n.s.
Dx x Cond x Topic	42	22.082	0.525	< 1	n.s.
Within Replicates	672	906.875	1.349		
Total	767	1023.708			

Table 21

Mean Interview Response Ratings by Variable and Category--Personal Disclosure

Variable	Category	$\overline{X}$
Diagnosis	Paranoid Schizophrenics	2.445
	Nonparanoid Schizophrenics	2.578
	Nonpsychotics	2.855
Goal-Demand condition	Personal Demand - No Goal	2.739
	Personal Demand - Open Ward	2.713
	Personal Demand - Discharge	2.697
	Impersonal Demand - No Goal	2.354
Topic	Depending on People	2.489
	Getting Angry at People	2.781
	Helping Other People	2.520
	Love	2.572
	Being Good at Things	2.729
	Being Rejected by People	2.489
	Feeling Guilty	2.770
	The Future	2.656

Table 22

Mean Interview Response Ratings (Diagnosis by Condition)--Personal Disclosure

	PS	NPS	NonPsy
PNG	2.484	2.781	2.953
POW	2.812	2.375	2.953
PDS	2.265	2.687	3.140
ING	2.218	2.468	2.375

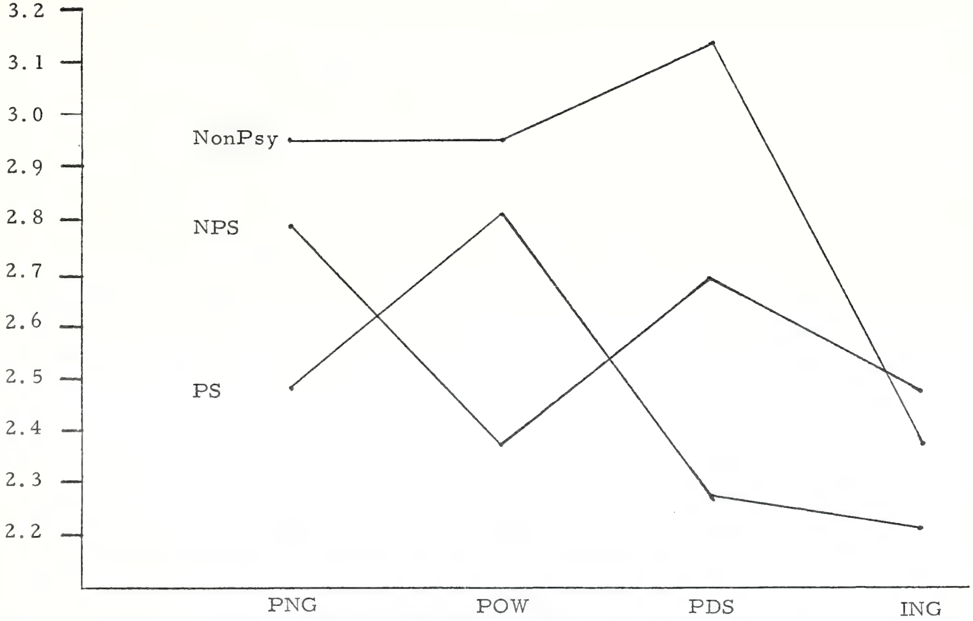

Fig. 1. Mean Interview Response Ratings (Diagnosis by Condition)--Personal Disclosure.

both Personal Demand-Goal conditions in between. No prediction of differences among conditions or topics was made.

Table 22 presents mean interview response ratings for each cell, and Figure 1 displays these means graphically. Hypothesis 1a stated: Paranoid and nonparanoid schizophrenics will be less disclosing than nonpsychotics in the Personal Demand-No Goal condition. The data failed to confirm the hypothesis, although the difference was in the predicted direction ($t = .751$, $df = 22$, one-tailed $p =$ n. s.). Hypothesis 1b stated: Paranoid and nonparanoid schizophrenics will not differ significantly from nonpsychotics in levels of disclosure in the Personal Demand-Open Ward condition. The data supported this hypothesis with no significant differences found ($t = 1.064$, $df = 22$, two-tailed $p =$ n. s.). Hypothesis 1c stated: Paranoid and nonparanoid schizophrenics will be less disclosing than nonpsychotics in the Personal Demand-Discharge condition. The data supported this hypothesis ($t = 1.909$, $df = 22$, one-tailed $p < .05$). Hypothesis 1d stated: Paranoid and nonparanoid schizophrenics will not differ significantly from nonpsychotics in levels of disclosure in the Impersonal Demand-No Goal condition. The data supported this hypothesis with no significant differences found ($t = .0721$, $df = 22$, two-tailed $p =$ n. s.).

In presenting subjects' demographic characteristics, it was noted that Negroes and Caucasians were not evenly distributed across cells. Jourard's (1964) self-disclosure research suggested that race could

influence the Personal Disclosure results. Consequently, the Personal Disclosure ratings were further assessed for any confounding influence; t tests were performed within each Diagnostic category and each Goal-Demand condition. There were no significant differences between Negroes and Caucasians on Personal Disclosure in any diagnostic category. Among the Goal-Demand conditions, differences were found only on the topics Love ($t = 2.56$, $df = 22$, two-tailed $p < .05$) and Being Good at Things ($t = 2.24$, $df = 22$, two-tailed $p < .05$) in the Personal Demand-No Goal condition. There were no significant differences on the other six topics in this condition, nor on any of the eight topics in the Personal Demand-Open Ward, Personal Demand-Discharge, and Impersonal Demand-No Goal conditions. Since specific hypotheses about Personal Disclosure were concerned only with diagnostic differences, it may be concluded that race was not a confounding influence.

Avoidance

Analysis of variance of Avoidance ratings revealed significant main effects for Diagnosis ($F = 47.11$, $df = 2/672$, $p < .001$) and Topic ($F = 2.54$, $df = 7/672$, $p < .025$), as well as a Diagnosis x Goal-Demand conditions interaction ($F = 3.94$, $df = 6/672$, $p < .005$). There was no main effect for Condition, nor were there any other significant interactions. Table 23 summarizes these ANOVA results.

Table 24 presents means for Diagnosis, Goal-Demand conditions

Table 23

Summary of Three Factor ANOVA--Avoidance

Source	df	SS	MS	F	p
Dx	2	182.783	91.391	47.11	< .001
Cond	3	6.859	2.286	1.18	n.s.
Topic	7	34.494	4.927	2.54	< .025
Dx x Cond	6	45.914	7.652	3.94	< .005
Dx x Topic	14	14.716	1.051	< 1	n.s.
Cond x Topic	21	18.682	0.889	< 1	n.s.
Dx x Cond x Topic	42	30.869	0.735	< 1	n.s.
Within Replicates	672	1303.750	1.940		
Total	767	1638.070			

Table 24

Mean Interview Response Ratings by Variable and Category--Avoidance

Variable	Category	$\bar{X}$
Diagnosis	Paranoid Schizophrenics	2.906
	Nonparanoid Schizophrenics	2.230
	Nonpsychotics	1.714
Goal-Demand condition	Personal Demand - No Goal	2.427
	Personal Demand - Open Ward	2.161
	Personal Demand - Discharge	2.276
	Impersonal Demand - No Goal	2.270
Topic	Depending on People	2.479
	Getting Angry at People	2.208
	Helping Other People	2.083
	Love	1.968
	Being Good at Things	2.354
	Being Rejected by People	2.656
	Feeling Guilty	2.385
	The Future	2.135

Table 25

Mean Interview Response Ratings (Diagnosis by Condition)--Avoidance

	PS	NPS	NonPsy
PNG	3.109	2.313	1.859
POW	2.297	2.500	1.688
PDS	2.922	2.266	1.641
ING	3.297	1.844	1.672

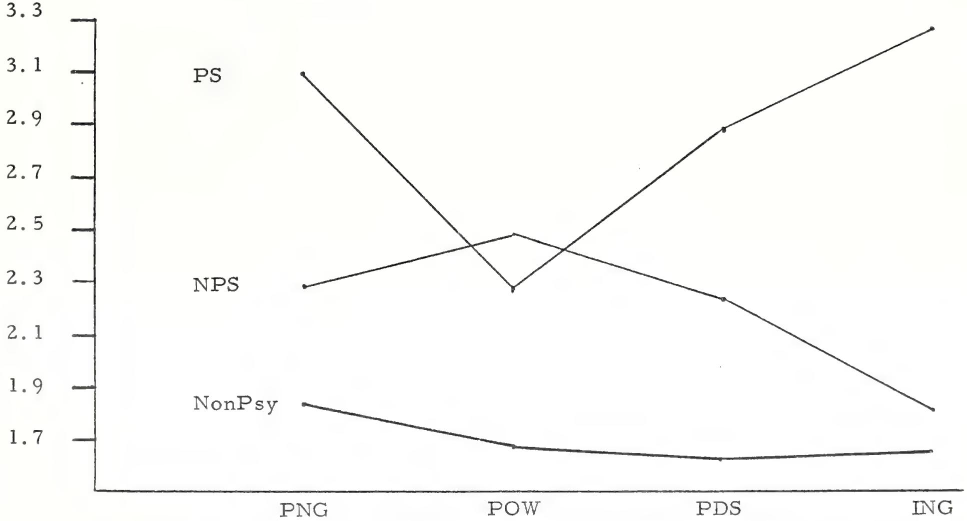

Fig. 2. Mean Interview Response Ratings (Diagnosis by Condition)--Avoidance.

and Topics. Paranoid schizophrenics were the most avoidant while nonpsychotics were the least avoidant. This was in the expected direction. Subjects in the Personal Demand-No Goal condition were the most avoidant, while subjects in the Personal Demand-Open Ward condition were the least avoidant, with the Personal Demand-Discharge and Impersonal Demand-No Goal conditions in between. Topic results will be considered after the hypotheses predicted for the Avoidance measure have been presented.

Table 25 presents mean interview response ratings for each cell, and Figure 2 displays these means graphically. Hypothesis 1a stated: Paranoid schizophrenics will be more avoidant than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-No Goal condition. The data supported this hypothesis ($t = 1.919$, $df = 22$, one-tailed $p < .05$). Hypothesis 1b stated: Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of avoidance in the Personal Demand-Open Ward condition. The data supported this hypothesis ($t = .488$, $df = 22$, two-tailed $p =$ n.s.). Hypothesis 1c stated: Paranoid schizophrenics will be more avoidant than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-Discharge condition. The data supported this hypothesis ($t = 2.152$, $df = 22$, one-tailed $p < .025$). Hypothesis 1d stated: Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of avoidance in the Impersonal Demand-No Goal

condition. The data failed to support this hypothesis. Paranoid schizophrenics were significantly more avoidant than nonparanoid schizophrenics and nonpsychotics in this condition ($t = 3.938$, $df = 22$, two-tailed $p < .001$).

Hypothesis 2 stated: Paranoid schizophrenics in the Personal Demand-Open Ward condition will be less avoidant than paranoid schizophrenics in the Personal Demand-No Goal condition. The data supported this hypothesis ($t = 1.811$, $df = 14$, one-tailed $p < .05$).

Hypothesis 3 stated: Paranoid schizophrenics in the Personal Demand-Discharge condition will be more avoidant than paranoid schizophrenics in the Personal Demand-No Goal condition. The data failed to support this hypothesis and indicated a slight difference in the reverse direction ($t = -.314$, $df = 14$, two-tailed p = n. s.).

Although no Topic effect was predicted, the Avoidance measure yielded a Topic main effect. Unlike Diagnosis and Condition, it was possible to examine Topic in the context of a one-factor analysis of variance without losing the potency of the three-factor analysis since, for Topic, similarly high degrees of freedom were maintained for the F ratio error term. Thus, topic differences were assessed by a Duncan's multiple-range test at $p < .05$ on the means produced in the one-way data array. Since there were no significant interactions involving Topic, all diagnoses and conditions were combined. Table 26 summarizes the ANOVA results. The topic means were contained in Table 24, and Figure 3

Table 26

Summary of One Factor Analysis of Variance for Topic--Avoidance

Source	df	SS	MS	F	p
Between groups	7	34.495	4.927	2.335	.023
Within groups	760	1603.626	2.110		
Total	767	1638.121			

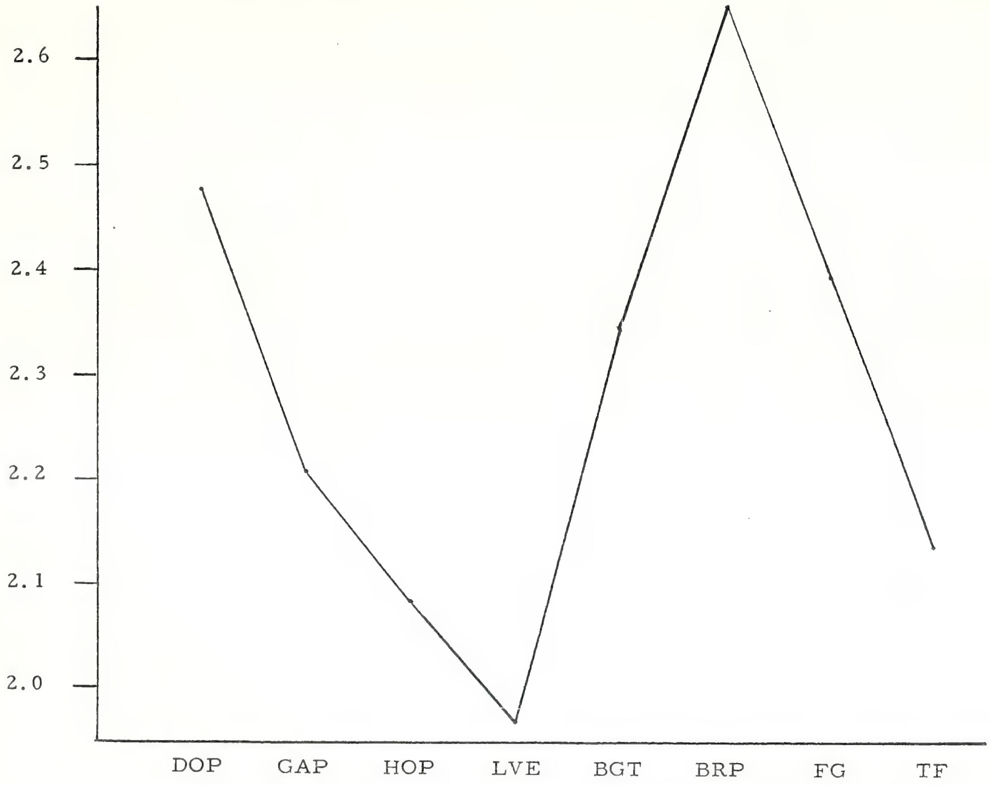

Fig. 3. Mean Interview Response Ratings of Topics--Avoidance.

displays these means graphically. As expected, the one-way analysis of variance also produced a significant Topic effect ($F = 2.335$, $df = 7/760$, $p < .025$). The Duncan's procedure yielded significant differences, with subjects being significantly more avoidant on Being Rejected by People than on Helping Other People, Love, and The Future. In addition, subjects were significantly more avoidant on Depending on People than on Love.

When Diagnoses and Goal-Demand conditions were analyzed separately by the same method, individual topic differences emerged only twice. There were no significant effects on the one-factor Topic ANOVAs or individual differences on the Duncan's procedure for either schizophrenic group. While the ANOVA for nonpsychotics did not produce a significant effect ($F = 1.729$, $df = 7/248$, $p = .102$), the Duncan's procedure revealed that nonpsychotics were significantly more avoidant on Being Good at Things than on Helping Other People and Love. The ANOVA summaries and respective topic means are presented in Tables 27, 28, and 29, and Figure 4 displays the means graphically.

Among Goal-Demand conditions there were no ANOVA effects or differences on the Duncan's test in any of the three Personal Demand conditions (No Goal, Open Ward, Discharge). The only difference emerged in the Impersonal-No Goal condition. Again, while the ANOVA did not produce a significant effect ($F = 1.451$, $df = 7/184$, $p = .187$), the Duncan's procedure revealed that subjects in this condition were

Table 27

Summary of One Factor (Topic) ANOVA and Means on Avoidance--Paranoid Schizophrenics

Source	df	SS	MS	F	p
Between groups	7	28.000	4.000	1.638	n.s.
Within groups	248	605.750	2.442		
Total	255	633.750			

Topic	$\bar{X}$
Depending on People	3.343
Getting Angry at People	2.937
Helping Other People	2.625
Love	2.531
Being Good at Things	2.781
Being Rejected by People	3.375
Feeling Guilty	3.156
The Future	2.500

Table 28

Summary of One Factor (Topic) ANOVA and Means on Avoidance--Nonparanoid Schizophrenics

Source	df	SS	MS	F	p
Between groups	7	10.683	1.526	< 1	n. s.
Within groups	248	584.718	2.357		
Total	255	595.402			

Topic	$\bar{X}$
Depending on People	2.281
Getting Angry at People	2.156
Helping Other People	2.187
Love	1.906
Being Good at Things	2.281
Being Rejected by People	2.656
Feeling Guilty	2.312
The Future	2.062

Table 29

Summary of One Factor (Topic) ANOVA and Means on Avoidance--Nonpsychotics

Source	df	SS	MS	F	p
Between groups	7	10.527	1.503	1.729	n.s.
Within groups	248	215.656	0.869		
Total	255	226.183			

Topic	$\overline{X}$
Depending on People	1.812
Getting Angry at People	1.531
Helping Other People	1.437
Love	1.468
Being Good at Things	2.000
Being Rejected by People	1.937
Feeling Guilty	1.687
The Future	1.843

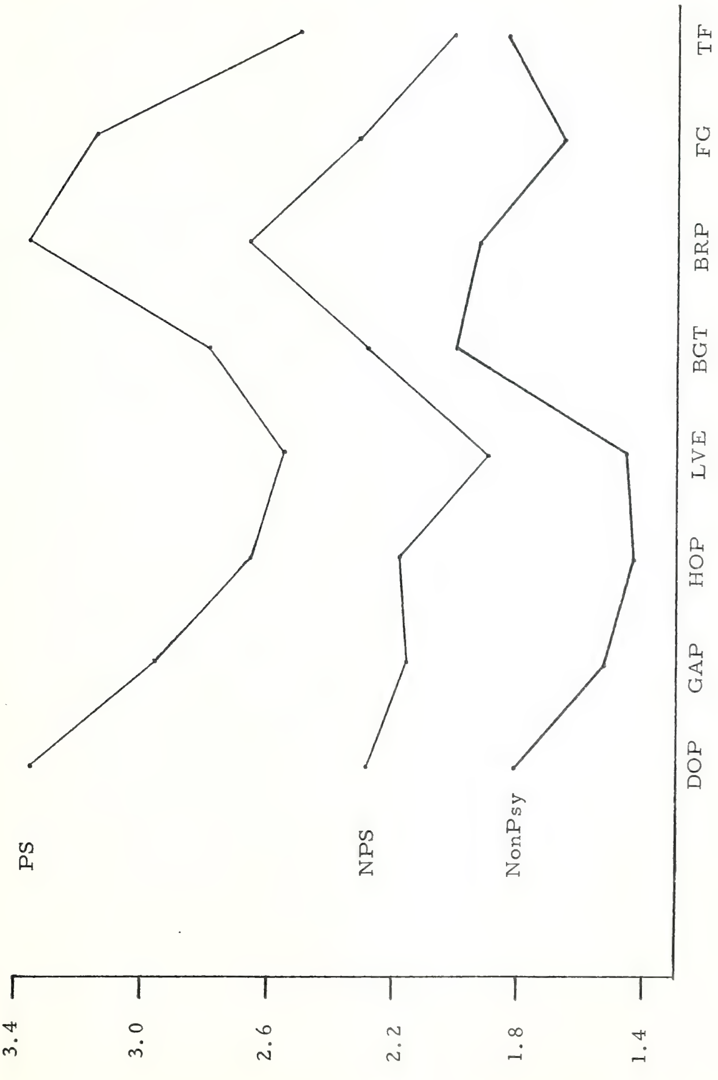

Fig. 4. Topic Means by Diagnosis--Avoidance.

Table 30

Summary of One Factor (Topic) ANOVA and Means on Avoidance--Personal Demand - No Goal Condition

Source	df	SS	MS	F	p
Between groups	7	8.395	1.199	< 1	n. s.
Within groups	184	476.584	2.590		
Total	191	484.979			

Topic	$\overline{X}$
Depending on People	2.583
Getting Angry at People	2.375
Helping Other People	2.000
Love	2.291
Being Good at Things	2.708
Being Rejected by People	2.625
Feeling Guilty	2.375
The Future	2.458

Table 31

Summary of One Factor (Topic) ANOVA and Means on Avoidance--Personal Demand - Open Ward Condition

Source	df	SS	MS	F	p
Between groups	7	8.702	1.243	< 1	n.s.
Within groups	184	287.292	1.561		
Total	191	295.995			

Topic	$\overline{X}$
Depending on People	2.208
Getting Angry at People	2.125
Helping Other People	2.041
Love	1.791
Being Good at Things	2.333
Being Rejected by People	2.541
Feeling Guilty	2.250
The Future	2.000

Table 32

Summary of One Factor (Topic) ANOVA and Means on Avoidance--Personal Demand - Discharge Condition

Source	df	SS	MS	F	p
Between groups	7	11.910	1.701	< 1	n. s.
Within groups	184	376.459	2.046		
Total	191	388.370			

Topic	$\bar{X}$
Depending on People	2.708
Getting Angry at People	2.083
Helping Other People	2.083
Love	1.958
Being Good at Things	2.208
Being Rejected by People	2.625
Feeling Guilty	2.208
The Future	2.333

Table 33

Summary of One Factor (Topic) ANOVA and Means on
Avoidance--Impersonal Demand -
No Goal Condition

Source	df	SS	MS	F	p
Between groups	7	24.166	3.452	1.451	n. s.
Within groups	184	437.751	2.379		
Total	191	461.917			

Topic	$\bar{X}$
Depending on People	2.416
Getting Angry at People	2.250
Helping Other People	2.208
Love	1.833
Being Good at Things	2.166
Being Rejected by People	2.833
Feeling Guilty	2.708
The Future	1.750

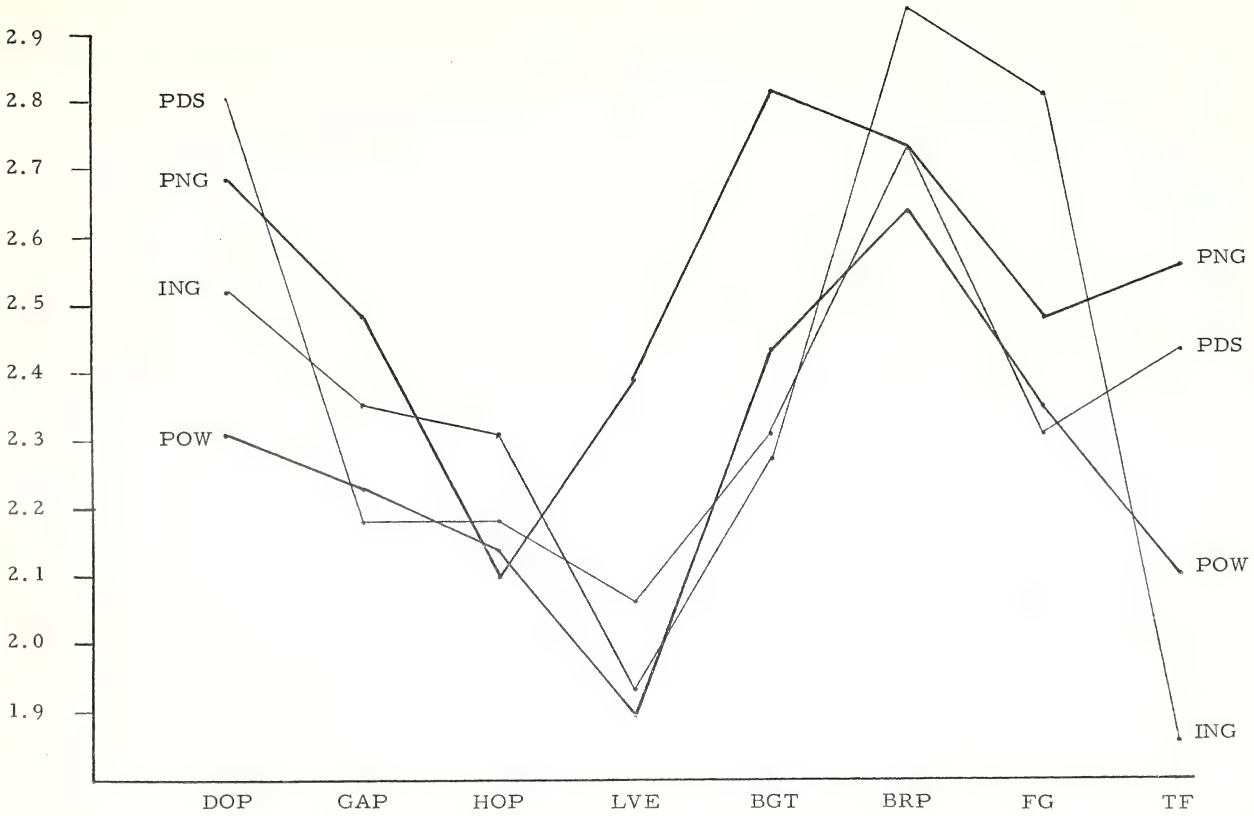

Fig. 5. Topic Means by Goal - Demand Conditions--Avoidance.

significantly more avoidant on Being Rejected by People than on The Future. The ANOVA summaries and respective topic means are presented in Tables 30, 31, 32, and 33, and Figure 5 displays the means graphically.

Suspiciousness

Analysis of variance of Suspiciousness ratings revealed a significant main effect for Diagnosis ($F = 15.98$, $df = 2/672$, $p < .001$) and a Diagnosis x Goal-Demand conditions interaction ($F = 10.15$, $df = 6/672$, $p < .001$). There were no main effects for Condition or Topic, nor were there any other significant interactions. Table 34 summarizes these ANOVA results.

Table 35 presents means for Diagnosis, Goal-Demand conditions and Topics. Nonparanoid schizophrenics were slightly more suspicious than paranoid schizophrenics, and both were substantially more suspicious than nonpsychotics. However, it had been expected that paranoid schizophrenics would be more suspicious than the other two diagnostic groups. Subjects in the Personal Demand-Open Ward condition were the least suspicious, which was expected. Contrary to expectations, however, subjects in the Impersonal Demand-No Goal condition were the most suspicious, followed by the Personal Demand-No Goal and Personal Demand-Discharge conditions. These differences, however, failed to produce a main effect.

Table 34

Summary of Three Factor ANOVA--Suspiciousness

Source	df	SS	MS	F	p
Dx	2	29.539	14.769	15.98	< .001
Cond	3	3.489	1.163	1.21	n. s.
Topic	7	3.541	0.505	< 1	n. s.
Dx x Cond	6	58.440	9.740	10.15	< .001
Dx x Topic	14	5.981	0.427	< 1	n. s.
Cond x Topic	21	5.885	0.280	< 1	n. s.
Dx x Cond x Topic	42	11.372	0.270	< 1	n. s.
Within Replicates	672	645.000	0.959		
Total	767	763.250			

Table 35

Mean Interview Response Ratings by Variable and Category--Suspiciousness

Variable	Category	$\bar{X}$
Diagnosis	Paranoid Schizophrenics	0.480
	Nonparanoid Schozophrenics	0.484
	Nonpsychotics	0.066
Goal-Demand condition	Personal Demand - No Goal	0.380
	Personal Demand - Open Ward	0.229
	Personal Demand - Discharge	0.364
	Impersonal Demand - No Goal	0.401
Topic	Depending on People	0.427
	Getting Angry at People	0.437
	Helping Other People	0.322
	Love	0.416
	Being Good at Things	0.291
	Being Rejected by People	0.322
	Feeling Guilty	0.270
	The Future	0.260

Table 36

Mean Interview Response Ratings (Diagnosis by Condition)--Suspiciousness

	PS	NPS	NonPsy
PNG	.172	.906	.063
POW	.031	.641	.016
PDS	.891	.141	.063
ING	.828	.250	.125

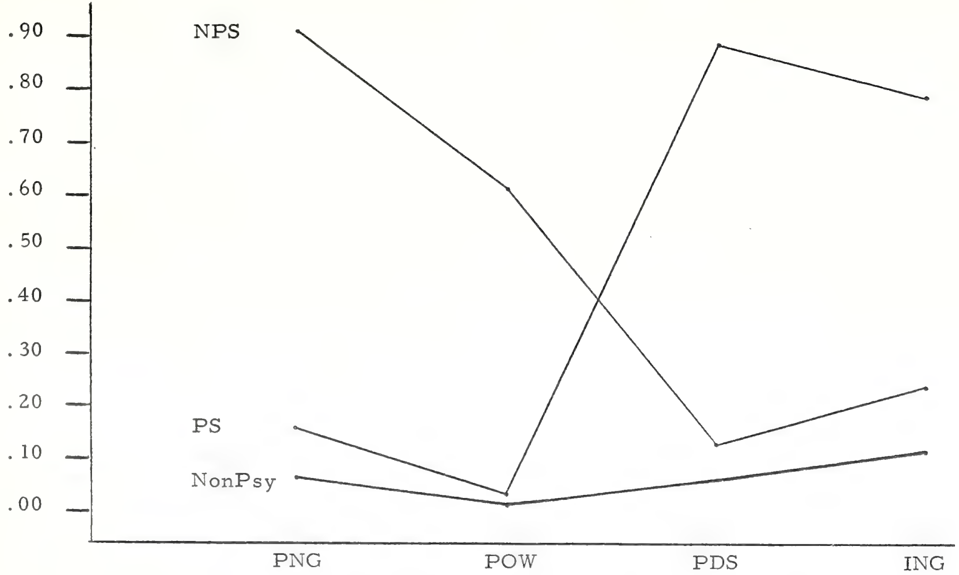

Fig. 6. Mean Interview Response Ratings (Diagnosis by Condition)--Suspiciousness.

Table 36 presents mean interview response ratings for each cell, and Figure 6 displays these means graphically. Hypothesis 1a stated: Paranoid schizophrenics will be more suspicious than nonparanoid schizophrenics or nonpsychotics in the Personal Demand-No Goal condition. The data failed to support this hypothesis, and there was a difference in the reverse direction accounted for by the unexpectedly high suspiciousness of nonparanoid schizophrenics in this condition ($t = -.7205$, df = 22, two-tailed p = n. s.). Hypothesis 1b stated: Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of suspiciousness in the Personal Demand-Open Ward condition. The data supported this hypothesis ($t = .8277$, df = 22, two-tailed p = n. s.). Hypothesis 1c stated: Paranoid schizophrenics will be more suspicious than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-Discharge condition. The data supported this hypothesis ($t = 2.532$, df = 22, one-tailed $p < .01$). Hypothesis 1d stated: Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of suspiciousness in the Impersonal Demand-No Goal condition. The data supported this hypothesis ($t = 1.293$, df = 22, two-tailed p = n. s.).

Hypothesis 2 stated: Paranoid schizophrenics in the Personal Demand-Open Ward condition will be less suspicious than paranoid schizophrenics in the Personal Demand-No Goal condition. The data failed to support this hypothesis, although the difference was in the

predicted direction (t = .9038, df = 14, one-tailed p = n.s.).

Hypothesis 3 stated: Paranoid schizophrenics in the Personal Demand-Discharge condition will be more suspicious than paranoid schizophrenics in the Personal Demand-No Goal condition. The data failed to support this hypothesis, although there was a strong trend in the predicted direction (t = 1.558, df = 14, one-tailed p < .10).

Delusional thinking

Analysis of variance of Delusional Thinking ratings revealed significant main effects for Diagnosis (F = 8.86, df = 3/672, p < .001) and Topic (F = 4.16, df = 7/672, p < .001). There were no significant interactions, although there was a strong trend for a Diagnosis x Goal-Demand conditions interaction (F = 1.975, df = 6/672, p < .10). Table 37 summarizes the ANOVA results.

Table 38 presents means for Diagnosis, Goal-Demand conditions and Topics. Paranoid schizophrenics were most delusional in thinking, while nonparanoid schizophrenics and nonpsychotics were equally and less delusional in thinking. Subjects in the Personal Demand-Open Ward condition were most delusional in thinking, while those in the Personal Demand-Discharge condition were the least so. This was contrary to the expected direction. Subjects in both No Goal conditions were in between, with their demand-group difference being in the expected direction. Subjects in the Personal Demand-No Goal condition were more delusional,

Table 37

Summary of Three Factor ANOVA--Delusional Thinking

Source	df	SS	MS	F	p
Dx	2	18.815	9.407	21.63	< .001
Cond	3	11.557	3.852	8.86	< .001
Topic	7	12.661	1.808	4.16	< .001
Dx x Cond	6	5.153	0.858	1.97	n. s. (< .10)
Dx x Topic	14	5.518	0.394	< 1	n. s.
Cond x Topic	21	3.734	0.177	< 1	n. s.
Dx x Cond x Topic	42	17.139	0.408	< 1	n. s.
Within Replicates	672	292.250	0.434		
Total	767	366.830			

Table 38

Mean Interview Response Ratings by Variable and Category--Delusional Thinking

Variable	Category	$\bar{X}$
Diagnosis	Paranoid Schizophrenics	0.484
	Nonparanoid Schizophrenics	0.152
	Nonpsychotics	0.152
Goal-Demand condition	Personal Demand - No Goal	0.359
	Personal Demand - Open Ward	0.401
	Personal Demand - Discharge	0.098
	Impersonal Demand - No Goal	0.192
Topic	Depending on People	0.135
	Getting Angry at People	0.375
	Helping Other People	0.239
	Love	0.302
	Being Good at Things	0.145
	Being Rejected by People	0.510
	Feeling Guilty	0.291
	The Future	0.104

Table 39

Mean Interview Response Ratings (Diagnosis by Condition)--Delusional Thinking

	PS	NPS	NonPsy
PNG	.703	.188	.172
POW	.672	.281	.250
PDS	.141	.031	.125
ING	.422	.094	.063

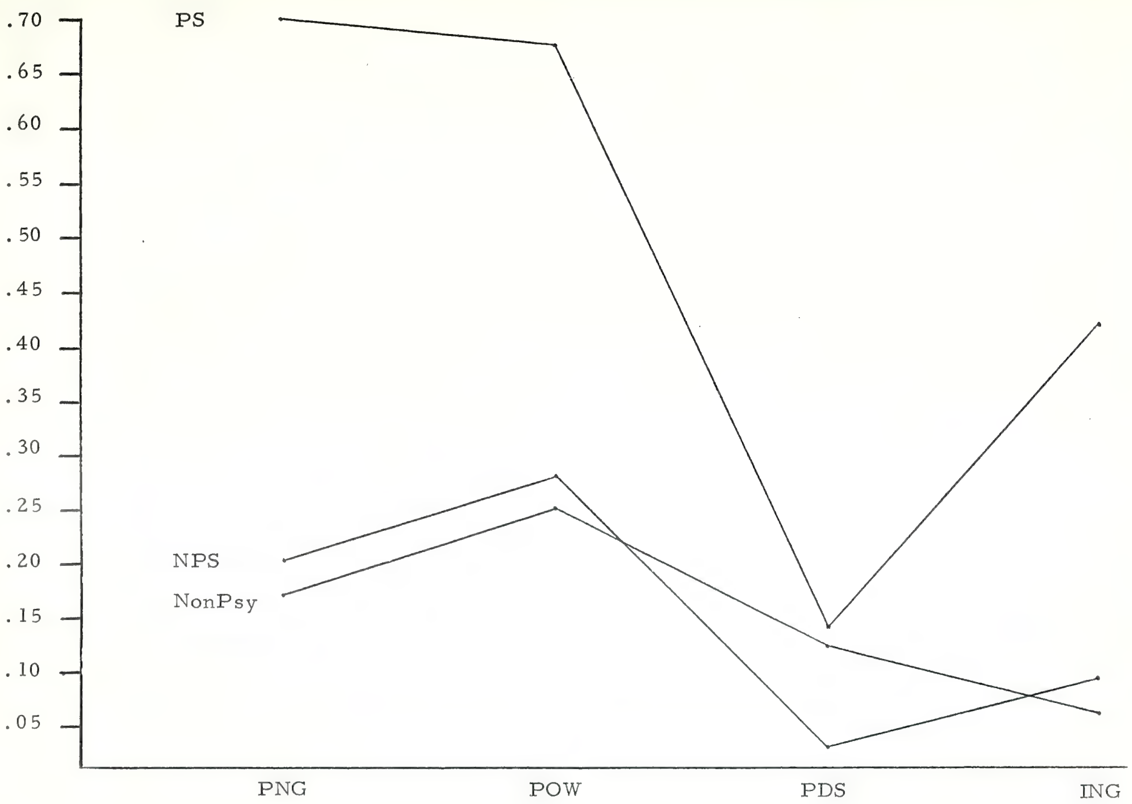

Fig. 7. Mean Interview Response Ratings (Diagnosis by Condition)--Delusional Thinking.

and those in the Impersonal Demand-No Goal condition were less delusional. Topic results will be considered after the results of hypotheses predicted for the Delusional Thinking measure have been presented.

Table 39 presents mean interview response ratings for each cell, and Figure 7 displays these means graphically. Hypothesis 1a stated: Paranoid schizophrenics will be more delusional in thinking than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-No Goal condition. The data supported this hypothesis ($t = 2.296$, $df = 22$, one-tailed $p < .025$). Hypothesis 1b stated: Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of delusion in thinking in the Personal Demand-Open Ward condition. The data supported this hypothesis, although there was a trend toward paranoid schizophrenics being more delusional than the other two diagnostic groups ($t = 1.861$, $df = 22$, two-tailed $p < .10$). Hypothesis 1c stated: Paranoid schizophrenics will be more delusional in thinking than nonparanoid schizophrenics and nonpsychotics. The data failed to support this hypothesis, although the difference was in the predicted direction ($t = 1.162$, $df = 22$, one-tailed p = n.s.). Hypothesis 1d stated: Paranoid schizophrenics will not differ significantly from nonparanoid schizophrenics and nonpsychotics in levels of delusion in thinking in the Impersonal Demand-No Goal condition. The data did not support this hypothesis. Paranoid schizophrenics were significantly more delusional in thinking than nonparanoid schizophrenics and nonpsychotics ($t = 3.481$,

df = 22, two-tailed $p < .01$).

Hypothesis 2 stated: Paranoid schizophrenics in the Personal Demand-Open Ward condition will be less delusional in thinking than paranoid schizophrenics in the Personal Demand-No Goal condition. The data failed to support this hypothesis, although the difference was in the predicted direction ($t = .0722$, df = 14, one-tailed p = n. s.).

Hypothesis 3 stated: Paranoid schizophrenics in the Personal Demand-Discharge condition will be more delusional in thinking than paranoid schizophrenics in the Personal Demand-No Goal condition. The data failed to support this hypothesis, and there was a trend in the reverse direction ($t = -1.752$, df = 14, two-tailed p = n. s.).

Although no Topic effect was predicted, the Delusional Thinking measure yielded a Topic main effect. Individual differences were assessed in the same manner as Topic was analyzed on the Avoidance measure, using Duncan's multiple range test at $p < .05$ on the means produced in a one-way analysis of variance data array. The latter also yielded a significant Topic effect ($F = 3.881$, df = 7/760, $p < .001$). Table 40 summarizes the ANOVA results. The individual topic means were contained in Table 38 (p. 124), and they are displayed graphically in Figure 8. From the Duncan's procedure, it emerged that subjects were significantly more delusional on Being Rejected by People than on Depending on People, Helping Other People, Love, Being Good at Things, Feeling Guilty, and The Future. In addition, subjects were significantly

Table 40

Summary of One Factor Analysis of Variance for Topic--Delusional Thinking

Source	df	SS	MS	F	p
Between groups	7	12.661	1.808	3.881	.001
Within groups	760	354.208	.466		
Total	767	366.869			

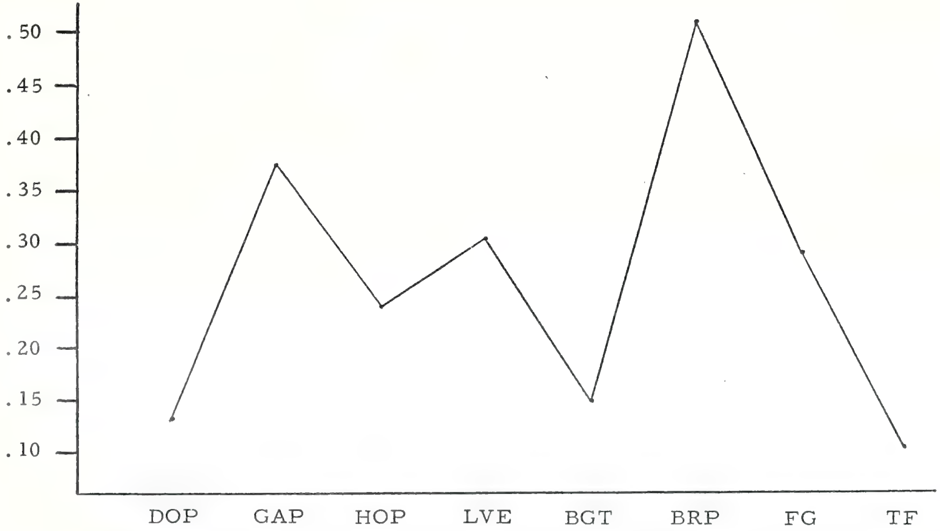

Fig. 8. Mean Interview Response Ratings of Topics--Delusional Thinking.

more delusional on Getting Angry at People than on Depending on People, Being Good at Things, and The Future.

When diagnoses were analyzed separately, there were some topic differences in each diagnostic group. The Topic effect on the paranoid schizophrenic groups' ANOVA was close to significance (F = 1.809, df = 7/248, p = .086), and the Duncan's procedure revealed that paranoid schizophrenics were more delusional on Being Rejected by People than on Depending on People. The nonparanoid schizophrenic ANOVA was also very close to significance (F = 2.003, df = 7/248, p = .055), and nonparanoid schizophrenics were more delusional on Being Rejected by People than on Depending on People, Being Good at Things, Feeling Guilty, and The Future. The nonpsychotics' ANOVA yielded a significant effect (F = 2.974, df = 7/248, p = .005), with this group being more delusional on Getting Angry at People than on Being Good at Things, Feeling Guilty, and The Future. They were also more delusional on Being Rejected by People than on Being Good at Things and The Future. The ANOVA summaries and means are presented in Tables 41, 42, and 43, and Figure 9 displays the means graphically.

Among Goal-Demand conditions there were no Topic differences in the Personal Demand-No Goal and Discharge conditions. The Personal Demand-Open Ward condition ANOVA did not yield a significant effect (F = 1.340, df = 7/184, p = .133). However, the Duncan's procedure revealed that subjects in this condition were significantly more delusional

Table 41

Summary of One Factor (Topic) ANOVA and Means on Delusional Thinking--Paranoid Schizophrenics

Source	df	SS	MS	F	p
Between groups	7	12.625	1.803	1.809	n.s. (< .10)
Within groups	248	247.312	.997		
Total	255	259.937			

Topic	$\overline{X}$
Depending on People	0.156
Getting Angry at People	0.625
Helping Other People	0.375
Love	0.531
Being Good at Things	0.312
Being Rejected by People	0.875
Feeling Guilty	0.687
The Future	0.312

Table 42

Summary of One Factor (Topic) ANOVA and Means on Delusional Thinking--Nonparanoid Schizophrenics

Source	df	SS	MS	F	p
Between groups	7	2.839	0.405	2.003	n.s. (< .055)
Within groups	248	50.218	0.202		
Total	255	53.058			

Topic	$\bar{X}$
Depending on People	0.093
Getting Angry at People	0.187
Helping Other People	0.156
Love	0.218
Being Good at Things	0.093
Being Rejected by People	0.375
Feeling Guilty	0.093
The Future	0.0

Table 43

Summary of One Factor (Topic) ANOVA and Means on Delusional Thinking--Nonpsychotics

Source	df	SS	MS	F	p
Between groups	7	2.714	0.387	2.974	.005
Within groups	248	32.343	0.130		
Total	255	35.058			

Topic	$\overline{X}$
Depending on People	0.156
Getting Angry at People	0.312
Helping Other People	0.187
Love	0.156
Being Good at Things	0.031
Being Rejected by People	0.281
Feeling Guilty	0.093
The Future	0.0

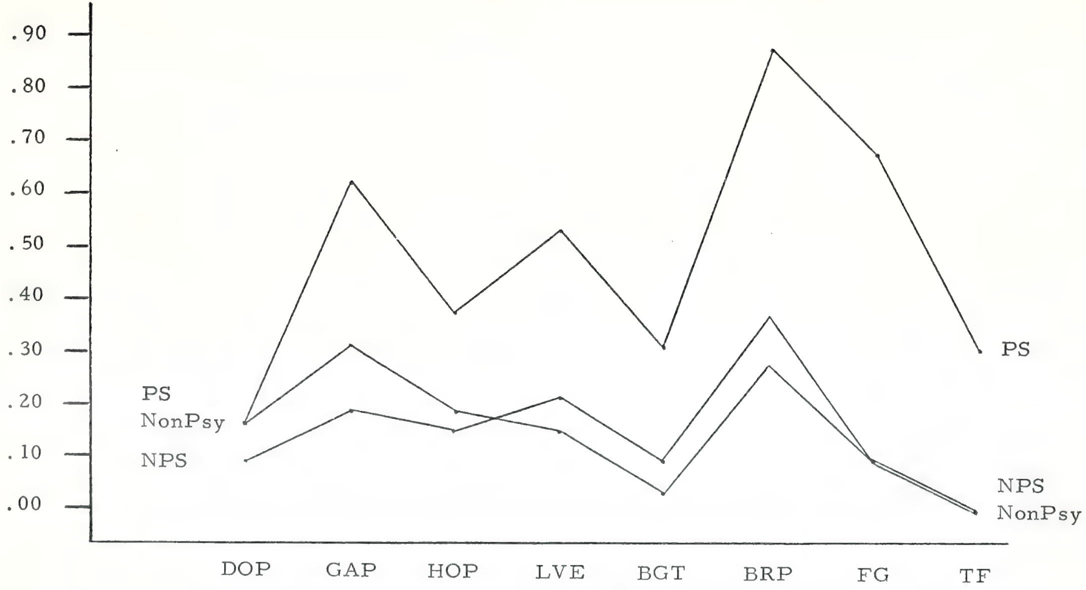

Fig. 9. Topic Means by Diagnosis--Delusional Thinking.

Table 44

Summary of One Factor (Topic) ANOVA and Means on Delusional Thinking--Personal Demand - No Goal Condition

Source	df	SS	MS	F	p
Between groups	7	4.661	0.665	< 1	n. s.
Within groups	184	127.541	0.693		
Total	191	132.203			

Topic	$\overline{X}$
Depending on People	0.208
Getting Angry at People	0.541
Helping Other People	0.375
Love	0.375
Being Good at Things	0.125
Being Rejected by People	0.625
Feeling Guilty	0.375
The Future	0.250

Table 45

Summary of One Factor (Topic) ANOVA and Means on Delusional Thinking--Personal Demand - Open Ward Condition

Source	df	SS	MS	F	p
Between groups	7	5.828	0.832	1.340	n. s.
Within groups	184	114.291	0.621		
Total	191	120.119			

Topic	$\bar{X}$
Depending on People	0.208
Getting Angry at People	0.541
Helping Other People	0.375
Love	0.458
Being Good at Things	0.333
Being Rejected by People	0.750
Feeling Guilty	0.375
The Future	0.166

Table 46

Summary of One Factor (Topic) ANOVA and Means on Delusional Thinking--Personal Demand - Discharge Condition

Source	df	SS	MS	F	p
Between groups	7	0.911	0.130	1.316	n. s.
Within groups	184	18.208	0.099		
Total	191	19.119			

Topic	$\overline{X}$
Depending on People	0.041
Getting Angry at People	0.208
Helping Other People	0.166
Love	0.083
Being Good at Things	0.041
Being Rejected by People	0.166
Feeling Guilty	0.083
The Future	0.0

Table 47

Summary of One Factor (Topic) ANOVA and Means on Delusional Thinking--Impersonal Demand - No Goal Condition

Source	df	SS	MS	F	p
Between groups	7	4.994	0.713	1.665	n. s.
Within groups	184	78.875	0.428		
Total	191	83.869			

Topic	$\bar{X}$
Depending on People	0.083
Getting Angry at People	0.208
Helping Other People	0.041
Love	0.291
Being Good at Things	0.083
Being Rejected by People	0.500
Feeling Guilty	0.333
The Future	0.0

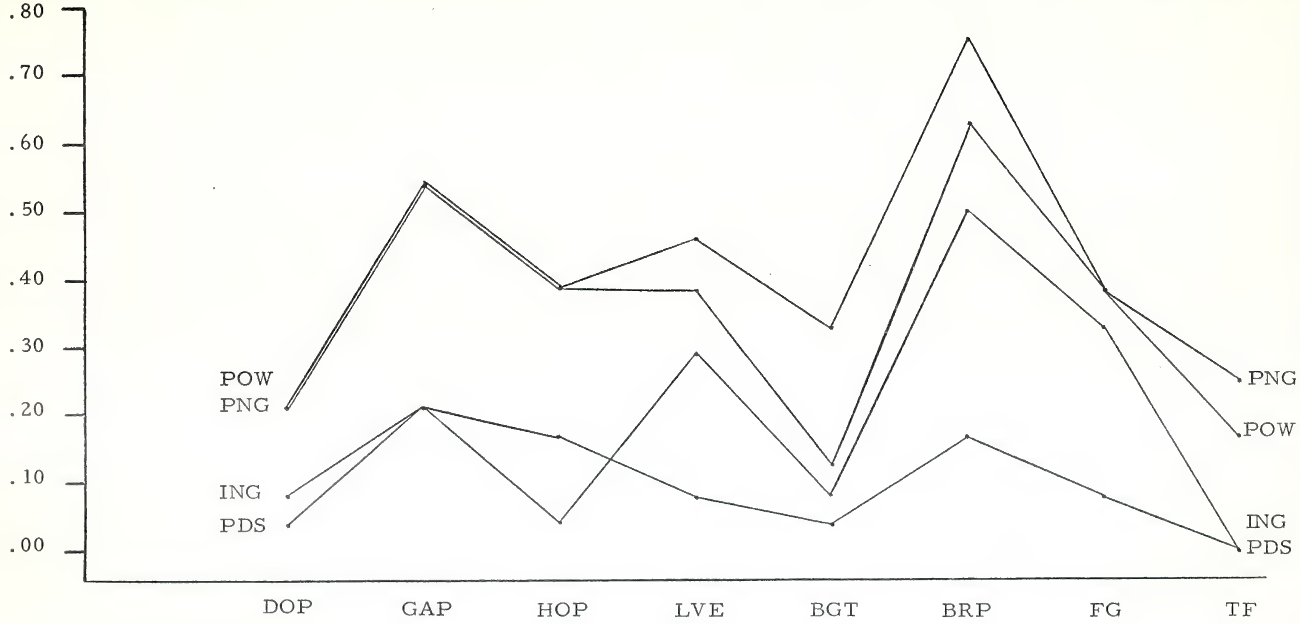

Fig. 10. Topic Means by Goal - Demand Conditions--Delusional Thinking.

on Being Rejected by People than on Depending on People and The Future. There was also an insignificant effect on the Impersonal Demand-No Goal ANOVA (F = 1.665, df = 7/184, p = .12), but the Duncan's procedure again revealed a significant difference with subjects in this condition being significantly more delusional on Being Rejected by People than on Helping Other People and The Future. The ANOVA summaries and means are presented in Tables 44, 45, 46, and 47, and Figure 10 displays the means graphically.

Autism

Analysis of variance of Autism ratings revealed a significant main effect for Diagnosis (F = 54.43, df = 2/672, p < .001) and a Diagnosis x Goal-Demand conditions interaction (F = 8.34, df = 6/672, p < .001). There were no other main or interaction effects. Table 48 summarizes the ANOVA results.

Table 49 presents means for Diagnosis, Goal-Demand conditions and Topic. As expected, paranoid schizophrenics emerged as most autistic, followed by nonparanoid schizophrenics and nonpsychotics. Subjects in the Personal Demand-No Goal condition were the most autistic with subjects in the other three Goal-Demand conditions being very similar and less autistic. These differences, however, failed to produce a main effect.

Table 50 presents mean interview response ratings for each cell,

Table 48

Summary of Three Factor ANOVA--Autism

Source	df	SS	MS	F	p
Dx	2	107.690	53.845	54.43	< .001
Cond	3	3.718	1.239	1.25	n.s.
Topic	7	4.979	0.711	< 1	n.s.
Dx x Cond	6	49.476	8.246	8.34	< .001
Dx x Topic	14	2.059	0.147	< 1	n.s.
Cond x Topic	21	11.218	0.534	< 1	n.s.
Dx x Cond x Topic	42	11.983	0.285	< 1	n.s.
Within Replicates	672	664.750	0.989		
Total	767	855.876			

Table 49

Mean Interview Response Ratings by Variable and Category--Autism

Variable	Category	$\overline{X}$
Diagnosis	Paranoid Schizophrenics	1.914
	Nonparanoid Schizophrenics	1.605
	Nonpsychotics	1.010
Goal-Demand condition	Personal Demand - No Goal	1.630
	Personal Demand - Open Ward	1.479
	Personal Demand - Discharge	1.458
	Impersonal Demand - No Goal	1.473
Topic	Depending on People	1.395
	Getting Angry at People	1.479
	Helping Other People	1.437
	Love	1.562
	Being Good at Things	1.437
	Being Rejected by People	1.614
	Feeling Guilty	1.625
	The Future	1.531

Table 50

Mean Interview Response Ratings (Diagnosis by Condition)--Autism

	PS	NPS	NonPsy
PNG	2.094	1.750	1.047
POW	1.578	1.859	1.000
PDS	1.656	1.766	.969
ING	2.344	1.047	1.031

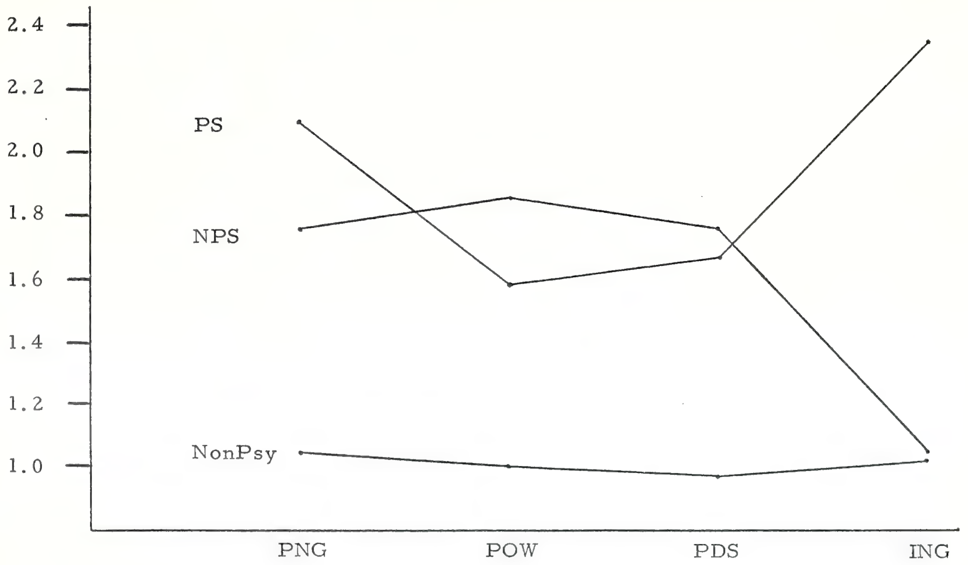

Fig. 11. Mean Interview Response Ratings (Diagnosis by Condition)--Autism.

and Figure 11 displays these means graphically. Hypothesis 1a stated: Paranoid and nonparanoid schizophrenics will be more autistic than nonpsychotics in the Personal Demand-No Goal condition. The data supported this hypothesis ($t = 2.086$, df = 22, one-tailed $p < .025$). Hypothesis 1b stated: Paranoid and nonparanoid schizophrenics will not differ significantly from nonpsychotics in levels of autism in the Personal Demand-Open Ward condition. The data failed to support this hypothesis, with paranoid and nonparanoid schizophrenics emerging as more autistic than nonpsychotics ($t = 2.466$, df = 22, two-tailed $p < .05$). Hypothesis 1c stated: Paranoid and nonparanoid schizophrenics will be more autistic than nonpsychotics in the Personal Demand-Discharge condition. The data supported this hypothesis ($t = 2.226$, df = 22, one-tailed $p < .025$). Hypothesis 1d stated: Paranoid and nonparanoid schizophrenics will not differ significantly from nonpsychotics in levels of autism in the Impersonal Demand-No Goal condition. The data supported this hypothesis ($t = 1.596$, df = 22, p = n.s.).

Hypothesis 2a stated: Paranoid schizophrenics in the Personal Demand-Open Ward condition will be less autistic than paranoid schizophrenics in the Personal Demand-No Goal condition. The data failed to support this hypothesis, although the difference was in the predicted direction ($t = 1.109$, df = 14, one-tailed p = n.s.). Hypothesis 2b stated: Nonparanoid schizophrenics in the Personal Demand-Open Ward condition will be less autistic than nonparanoid schizophrenics in the Personal

Demand-No Goal condition. The data failed to support this hypothesis, with a small difference occurring in the reverse direction ($t = -.199$, $df = 14$, two-tailed $p =$ n.s.).

Hypothesis 3a stated: Paranoid schizophrenics in the Personal Demand-Discharge condition will be more autistic than paranoid schizophrenics in the Personal Demand-No Goal condition. The data failed to support this hypothesis, with a nonsignificant difference occurring in the reverse direction ($t = -.8226$, $df = 14$, two-tailed $p =$ n.s.). Hypothesis 3b stated: Nonparanoid schizophrenics in the Personal Demand-Discharge condition will be more autistic than nonparanoid schizophrenics in the Personal Demand-No Goal condition. The data failed to support this hypothesis, although the difference was in the expected direction ($t = .0297$, $df = 14$, one-tailed $p =$ n.s.).

The Replication Conditions

To complete the presentation of the results, the portion of the current study which replicated the design of the earlier Shimkunas (1972) work will now be described. Consistent with the preceding sections, the results to be presented are based on subjects' interview response ratings, analyzed in this section by 3 x 2 x 8 ANOVAs. The three diagnostic groups and eight topics are the same. However, only the two No Goal conditions are utilized, one involving a demand for personal self-disclosure, the other a demand for impersonal self-disclosure, For the

sake of completeness, Appendix H, Tables 112-116, contains the results in which the analysis was reduced to two factors by summing the ratings for all eight topics. The results presented in this section will deal only with ANOVA summaries and their respective means, since individual cell means have already been presented in the previous sections.

Personal disclosure

Analysis of variance of Personal Disclosure ratings revealed a significant main effect for Condition ($F = 9.55$, $df = 1/336$, $p < .005$). There were no other main effects nor any interaction effects. Table 51 summarizes the ANOVA results. The Shimkunas study produced a Diagnosis as well as a Demand condition main effect and a Diagnosis x Demand conditions interaction effect.

Table 52 presents means for Diagnosis, Demand conditions, and Topics. As in the Shimkunas study, paranoid schizophrenics were less disclosing than nonparanoid schizophrenics and nonpsychotics. However, these differences failed to produce a main effect. Subjects in the Personal Demand condition were significantly more disclosing than subjects in the Impersonal Demand condition, consistent with the Shimkunas study. There was no topic effect.

Avoidance

Analysis of variance of Avoidance ratings revealed a significant main effect for Diagnosis ($F = 33.68$, $df = 2/336$, $p < .001$). As in the

Table 51

Summary of Three Factor ANOVA--
Personal Disclosure Replication

Source	df	SS	MS	F	p
Dx	2	7.421	3.710	2.49	n.s. (< .10)
Cond	1	14.260	14.260	9.55	< .005
Topic	7	5.531	0.790	< 1	n.s.
Dx x Cond	2	1.817	0.908	< 1	n.s.
Dx x Topic	14	5.578	0.398	< 1	n.s.
Cond x Topic	7	5.531	0.790	< 1	n.s.
Dx x Cond x Topic	14	9.265	0.661	< 1	n.s.
Within Replicates	336	501.750	1.493		
Total	383	551.156			

Table 52

Mean Interview Response Ratings by Variable and
Category--Personal Disclosure Replication

Variable	Category	$\bar{X}$
Diagnosis	Paranoid Schizophrenics	2.351
	Nonparanoid Schizophrenics	2.625
	Nonpsychotics	2.664
Goal-Demand condition	Personal Demand	2.739
	Impersonal Demand	2.354
Topic	Depending on People	2.437
	Getting Angry at People	2.729
	Helping Other People	2.520
	Love	2.395
	Being Good at Things	2.604
	Being Rejected by People	2.416
	Feeling Guilty	2.708
	The Future	2.562

Shimkunas study, there were no other main effects, nor any interaction effects. Table 53 summarizes the ANOVA results.

Table 54 presents means for Diagnosis, Demand conditions, and Topic. Paranoid schizophrenics were the most avoidant with nonparanoid schizophrenics and nonpsychotics respectively less avoidant. This was in the expected direction and consistent with Shimkunas. Subjects in the Personal Demand condition were more avoidant than subjects in the Impersonal Demand condition. Although not significant, the difference was in the expected direction and similar to Shimkunas. There was no topic effect.

Suspiciousness

Analysis of variance of Suspiciousness ratings revealed a significant main effect for Diagnosis (F = 7.46, df = 2/336, $p < .001$) and a Diagnosis x Demand conditions interaction (F = 11.91, df = 2/336, $p < .001$). There were no other main effects, nor any other interactions. Table 55 summarizes the ANOVA results. The Shimkunas study produced only a Condition main effect.

Table 56 presents means for Diagnosis, Demand conditions, and Topic. Nonparanoid schizophrenics were the most suspicious followed closely by paranoid schizophrenics. Nonpsychotics were considerably less suspicious. It had been expected that paranoid schizophrenics would be more suspicious than nonparanoid schizophrenics and nonpsychotics.

Table 53

Summary of Three Factor ANOVA--Avoidance Replication

Source	df	SS	MS	F	p
Dx	2	146.333	73.166	33.68	< .001
Cond	1	2.343	2.343	1.08	n.s.
Topic	7	19.947	2.849	1.31	n.s.
Dx x Cond	2	6.937	3.468	1.60	n.s.
Dx x Topic	14	21.958	1.568	< 1	n.s.
Cond x Topic	7	12.614	1.802	< 1	n.s.
Dx x Cond x Topic	14	9.071	0.647	< 1	n.s.
Within Replicates	336	730.000	2.172		
Total	383	949.207			

Table 54

Mean Interview Response Ratings by Variable and Category--Avoidance Replication

Variable	Category	$\overline{X}$
Diagnosis	Paranoid Schizophrenics	3.203
	Nonparanoid Schizophrenics	2.078
	Nonpsychotics	1.765
Goal-Demand condition	Personal Demand	2.427
	Impersonal Demand	2.270
Topic	Depending on People	2.500
	Getting Angry at People	2.312
	Helping Other People	2.104
	Love	2.062
	Being Good at Things	2.437
	Being Rejected by People	2.729
	Feeling Guilty	2.541
	The Future	2.104

Table 55

Summary of Three Factor ANOVA--
Suspiciousness Replication

Source	df	SS	MS	F	p
Dx	2	17.312	8.656	7.46	< .001
Cond	1	0.041	0.041	< 1	n.s.
Topic	7	4.447	0.635	< 1	n.s.
Dx x Cond	2	27.645	13.822	11.91	< .001
Dx x Topic	14	6.645	0.474	< 1	n.s.
Cond x Topic	7	2.416	0.345	< 1	n.s.
Dx x Cond x Topic	14	4.895	0.349	< 1	n.s.
Within Replicates	336	390.000	1.160		
Total	383	453.406			

Table 56

Mean Interview Response Ratings by Variable and
Category--Suspiciousness Replication

Variable	Category	$\overline{X}$
Diagnosis	Paranoid Schizophrenics	0.500
	Nonparanoid Schizophrenics	0.578
	Nonpsychotics	0.093
Goal-Demand condition	Personal Demand	0.380
	Impersonal Demand	0.401
Topic	Depending on People	0.520
	Getting Angry at People	0.541
	Helping Other People	0.333
	Love	0.500
	Being Good at Things	0.375
	Being Rejected by People	0.333
	Feeling Guilty	0.270
	The Future	0.250

However, Shimkunas' nonparanoid schizophrenics were also more suspicious than the paranoid schizophrenics. Also, contrary to expectations, subjects in the Impersonal Demand condition were slightly more suspicious than subjects in the Personal Demand condition, which was the reverse of the Shimkunas results. There was no Topic effect.

Delusional thinking

Analysis of variance of Delusional Thinking ratings revealed main effects for Diagnosis ($F = 14.95$, $df = 2/336$, $p < .001$), Demand conditions ($F = 5.04$, $df = 1/336$, $p < .05$), and Topic ($F = 2.27$, $df = 7/336$, $p < .05$). There were no significant interactions. Table 57 summarizes the ANOVA results. The Shimkunas study produced Diagnosis and Demand conditions main effects and a Diagnosis x Demand conditions interaction. Of course, no Topic effect was possible since it was not included in the Shimkunas analysis.

Table 58 presents means for Diagnosis, Demand conditions, and Topic. Paranoid schizophrenics were the most delusional, with nonparanoid schizophrenics and nonpsychotics being comparably less delusional. This was in the expected direction and consistent with the Shimkunas study. Also consistent with the earlier work, subjects in the Personal Demand condition were more delusional than subjects in the Impersonal Demand condition. Among Topics, Being Rejected by People again emerged as the one on which subjects were most delusional. Since

Table 57

Summary of Three Factor ANOVA--
Delusional Thinking Replication

Source	df	SS	MS	F	p
Dx	2	15.817	7.908	14.95	< .001
Cond	1	2.666	2.666	5.04	< .05
Topic	7	8.406	1.200	2.27	< .05
Dx x Cond	2	0.630	0.315	< 1	n. s.
Dx x Topic	14	7.265	0.518	< 1	n. s.
Cond x Topic	7	1.250	0.178	< 1	n. s.
Dx x Cond x Topic	14	4.949	0.353	< 1	n. s.
Within Replicates	336	177.750	0.529		
Total	383	218.735			

Table 58

Mean Interview Response Ratings by Variable and
Category--Delusional Thinking Replication

Variable	Category	$\bar{X}$
Diagnosis	Paranoid Schizophrenics	0.562
	Nonparanoid Schizophrenics	0.148
	Nonpsychotics	0.117
Goal-Demand condition	Personal Demand	0.359
	Impersonal Demand	0.192
Topic	Depending on People	0.145
	Getting Angry at People	0.375
	Helping Other People	0.208
	Love	0.333
	Being Good at Things	0.104
	Being Rejected by People	0.562
	Feeling Guilty	0.354
	The Future	0.125

individual topics were thoroughly analyzed in the previous section on Delusional Thinking, they are not reanalyzed here; unlike Diagnosis and Demand condition, there are no Shimkunas data with which to compare them.

Autism

Analysis of variance of Autism ratings revealed a main effect for Diagnosis ($F = 40.61$, $df = 2/336$, $p < .001$) and a Diagnosis x Demand conditions interaction ($F = 6.72$, $df = 2/336$, $p < .005$). There was no other main effect, nor any other significant interactions. Table 59 summarizes the ANOVA results. In addition to Diagnosis and Diagnosis x Demand conditions effects, the Shimkunas study also yielded a significant main effect for Demand conditions.

Table 60 presents means for Diagnosis, Demand conditions, and Topic. Paranoid schizophrenics were the most autistic with nonparanoid schizophrenics and nonpsychotics less so, respectively. It had been expected that nonparanoid schizophrenics would have been more similar to paranoid schizophrenics than nonpsychotics. In the Shimkunas study, nonparanoid schizophrenics were actually the most autistic. Subjects in the Personal Demand condition were more autistic than subjects in the Impersonal Demand condition. Although this difference was not significant, as it was in the Shimkunas study, it was in the expected direction. There was no topic effect.

Table 59

Summary of Three Factor ANOVA--Autism Replication

Source	df	SS	MS	F	p
Dx	2	93.598	46.799	40.61	< .001
Cond	1	2.343	2.343	2.04	n. s.
Topic	7	7.416	1.059	< 1	n. s.
Dx x Cond	2	15.484	7.742	6.72	< .005
Dx x Topic	14	2.317	0.165	< 1	n. s.
Cond x Topic	7	3.281	0.468	< 1	n. s.
Dx x Cond x Topic	14	3.242	0.231	< 1	n. s.
Within Replicates	336	387.250	1.152		
Total	383	514.935			

Table 60

Mean Interview Response Ratings by Variable and Category--Autism Replication

Variable	Category	$\bar{X}$
Diagnosis	Paranoid Schizophrenics	2.218
	Nonparanoid Schizophrenics	1.398
	Nonpsychotics	1.039
Goal-Demand condition	Personal Demand	1.630
	Impersonal Demand	1.473
Topic	Depending on People	1.333
	Getting Angry at People	1.479
	Helping Other People	1.437
	Love	1.583
	Being Good at Things	1.520
	Being Rejected by People	1.812
	Feeling Guilty	1.687
	The Future	1.562

CHAPTER IV

DISCUSSION

This chapter will consider the meaning of the results which were presented in the last chapter. The discussion will begin with an overview of the results, first according to the three major operational hypotheses and then according to the dependent measures. Next, the utility of the diagnostic categories, goal-demand conditions, and topics will be discussed. The major conclusions of this study will then be stated and their theoretical and therapeutic implications explored.

Overview of Results

Since the previous chapter presented a large number of results, the main ANOVA findings will be summarized according to the major operational hypotheses. The ANOVAs revealed main effects for Diagnosis on all five of the dependent measures. There were Goal-Demand conditions main effects on Personal Disclosure and Delusional Thinking, and Topic main effects on Avoidance and Delusional Thinking. There was a Diagnosis x Goal-Demand conditions interaction on four of the dependent measures: Personal Disclosure, Avoidance, Suspiciousness,

and Autism, with a strong trend ($p < .10$) for such an effect on Delusional Thinking. There were no other interactions on any of the measures.

The first major hypothesis stated: (a) Schizophrenics confronted by a demand for personal self-disclosure in the context either of no broader goal or a negative goal (Discharge) will demonstrate more verbal psychopathology than nonpsychotics in the same situation; (b) schizophrenics confronted by either a demand for impersonal self-disclosure or a demand for personal self-disclosure linked to a positive goal (remaining on an Open Ward) will not differ significantly from nonpsychotics in the same situation. Both elements of this hypothesis received considerable support. Part (a) of the hypothesis was assessed by examining the Personal Demand-No Goal and Discharge conditions. In the Personal Demand-No Goal condition, paranoid and nonparanoid schizophrenics were significantly more autistic than nonpsychotics, and they were less disclosing than nonpsychotics, although not significantly so. Paranoid schizophrenics were significantly more avoidant and delusional in thinking than nonparanoid schizophrenics and nonpsychotics. It had also been expected that the paranoid schizophrenics would be more suspicious. However, there was a nonsignificant difference in the reverse direction due to the unexpectedly high suspiciousness of nonparanoid schizophrenics.

In the Personal Demand-Discharge condition, there were also significant differences in the predicted direction on most measures.

Paranoid and nonparanoid schizophrenics were significantly less disclosing and significantly more autistic than nonpsychotics, while paranoid schizophrenics were significantly more avoidant and suspicious than nonparanoid schizophrenics and nonpsychotics with the same trend prevailing, although not at a significant level on delusional thinking. Thus, of the ten comparisons there were seven significant differences and two nonsignificant differences in the expected direction, with one nonsignificant difference in the reverse direction. These results provide strong support for the hypothesis that schizophrenics, when confronted by a demand for personal self-disclosure in the context of no broader goal or a negative goal (Discharge), will demonstrate more verbal psychopathology than nonpsychotics.

Part (b) of the first hypothesis was assessed by examining the Personal Demand-Open Ward and Impersonal Demand-No Goal conditions. It had been expected that schizophrenics would not differ significantly from nonpsychotics in these conditions. In the Personal Demand-Open Ward condition, paranoid and nonparanoid schizophrenics were not significantly more or less disclosing than nonpsychotics, but they were unexpectedly significantly more autistic. Paranoid schizophrenics were not significantly more avoidant, suspicious, or delusional in thinking than nonparanoid schizophrenics and nonpsychotics.

In the Impersonal Demand-No Goal condition, paranoid and nonparanoid schizophrenics were neither significantly less disclosing nor

significantly more autistic than nonpsychotics, and paranoid schizophrenics were not significantly more suspicious than nonparanoid schizophrenics and nonpsychotics. However, there were two unexpected results, with paranoid schizophrenics being significantly more avoidant and delusional in thinking than nonparanoid schizophrenics and nonpsychotics. Thus, on the ten comparisons, seven were nonsignificant as predicted, with three unexpectedly significant differences occurring. The results lend strong support to the hypothesis that schizophrenics confronted by a demand for personal self-disclosure linked to a positive goal (remaining on an Open Ward) will not differ significantly from nonpsychotics in the same situation. Considerable support was also demonstrated when subjects were confronted by a demand for impersonal self-disclosure, with schizophrenics again not usually differing significantly from nonpsychotics.

The second major hypothesis stated: Schizophrenics confronted by a demand for personal self-disclosure linked to a positive goal (remaining on an Open Ward) will demonstrate less verbal psychopathology than schizophrenics confronted by a demand for personal self-disclosure in the absence of a broader goal. The data produced only moderate support for this hypothesis. Among paranoid schizophrenics the difference was in the predicted direction on all four comparisons. However, they were significantly less psychopathological in the comparison conditions only on Avoidance. While they were also less suspicious, delusional in thinking, and autistic, these differences did not reach significance. There

was, therefore, some support for the hypothesis among paranoid schizophrenics.

Among nonparanoid schizophrenics the hypothesis was only examined on the Autism measure, and this comparison produced a small nonsignificant difference in the reverse direction. Inasmuch as only one comparison was made, the hypothesis received no support among nonparanoid schizophrenics.

Nonparanoid schizophrenics were compared only on the Autism measure because on all other measures except Personal Disclosure they had been grouped with nonpsychotics for within Goal-Demand conditions diagnostic comparisons. Since all those comparisons, except the Personal Demand-No Goal condition on Suspiciousness, emerged in the predicted direction, there was no valid reason to compare nonparanoid schizophrenics on these measures. For that reason, only paranoid schizophrenics were compared for within diagnosis differences on these measures. The Personal Disclosure measure was expected to reveal meaningful comparisons only within Goal-Demand conditions for diagnostic differences. There was no theoretical rationale for comparing either schizophrenic group for levels of disclosure between Goal-Demand conditions. Furthermore, none had been determined in the earlier Shimkunas (1972) study. Consequently, neither schizophrenic group was so compared on Personal Disclosure.

The third major hypothesis stated: Schizophrenics confronted by

a demand for personal self-disclosure linked to a negative goal (Discharge) will demonstrate more verbal psychopathology than schizophrenics confronted by a demand for personal self-disclosure in the absence of a broader goal. On the whole, the data failed to support this hypothesis. Among paranoid schizophrenics, and only on the Suspiciousness measure, there was more psychopathology in the Personal Demand-Discharge condition than in the Personal Demand-No Goal condition; in this instance the difference did not achieve significance, although there was a strong trend ($p < .10$) in the predicted direction. On Avoidance, Delusional Thinking, and Autism there were nonsignificant differences in the reverse direction. Consequently, among paranoid schizophrenics the hypothesis failed to be supported. The only comparison made for nonparanoid schizophrenics was again on Autism, and it yielded a small nonsignificant difference in the predicted direction. Among nonparanoid schizophrenics, then, on the basis of limited data, the hypothesis also failed to be supported.

Overview according to the dependent measures

Five dependent measures were used in this study: Personal Disclosure, Avoidance, Suspiciousness, Delusional Thinking, and Autism. They are each considered separately since there were no theoretical reasons to link them together, and ratings were made on the basis that they were independent from each other. The experience of Shimkunas

(1972) and that of the current study support any further use of these measures in the same manner.

Personal disclosure

Comparisons of Personal Disclosure were made within Goal-Demand conditions to assess diagnostic differences. Thus, only the first major hypothesis was being assessed on Personal Disclosure. As predicted, paranoid and nonparanoid schizophrenics were significantly less disclosing in the Personal Demand-Discharge condition, while they were not significantly less disclosing in the Personal Demand-Open Ward and Impersonal Demand-No Goal conditions.

An unexpected finding was the failure to produce a significant difference in the Personal Demand-No Goal condition, although the difference was in the expected direction--the schizophrenic groups being less disclosing than nonpsychotics. This result has some theoretical importance, since it fails to confirm a central finding of the Shimkunas (1972) study; it will be discussed further in assessing Goal-Demand conditions. The failure to produce the expected result in the Personal Demand-No Goal condition actually served to emphasize the difference achieved in the Personal Demand-Discharge condition. It suggests that the possibility of discharge leads to less disclosure among schizophrenics by adding to the threat imposed by a demand for personal self-disclosure. There also appears to be an important difference between schizophrenics

and nonpsychotics in this regard. In examining mean interview response ratings for each cell (Table 22, p. 96, and Figure 1, p. 97, presented these means), it can be seen that the significant difference in the "Discharge" condition compared to the nonsignificant difference in the "Personal-No Goal" condition was achieved not only by both schizophrenic groups becoming less disclosing, but also by nonpsychotics becoming more disclosing in the "Discharge" condition. Examining this from the Jourard (1964) tradition that disturbed individuals avoid personal self-disclosure, schizophrenics are behaving in a significantly more disturbed manner than nonpsychotics in the "Discharge" condition, while there was no such significant difference in the "Open Ward" condition. These results do not support the basic contention that disturbed individuals avoid personal self-disclosure. In the context of particular situations, schizophrenics were both significantly less disclosing and nonsignificantly different from nonpsychotics, who maintained a consistently high level of personal self-disclosure in the three "Personal" conditions. It should be noted that nonparanoid schizophrenics in the "Open Ward" condition were actually less disclosing than in the other "Personal" conditions, but not sufficiently so to produce a significant difference when the schizophrenic groups were compared with the nonpsychotics.

The Personal Disclosure measure proved to be a fruitful dimension with which to work. The rating scale used to assess it, which was

the slightly revised Shimkunas (1972) condensed version of that developed by Doster and Strickland (1971), produced among the highest interrater reliabilities both in the Shimkunas (1972) and the current studies (.94 to .97 and .96 to .98, respectively). It is strongly supported for future use.

Avoidance

Comparisons on the Avoidance measure were made within Goal-Demand conditions for differences between paranoid schizophrenics and the two other diagnostic groups (Hypothesis 1) and within the paranoid schizophrenic Diagnosis for differences between Goal-Demand conditions (Hypotheses 2 and 3). Avoidance was a dimension expected to be particularly salient to paranoid schizophrenics. Among Goal-Demand conditions (Hypothesis 1), the predicted significantly greater avoidance for paranoid schizophrenics compared to nonparanoid schizophrenics and nonpsychotics was found in the Personal Demand-No Goal and Discharge conditions, and the expected nonsignificant difference occurred in the Personal Demand-No Goal condition. However, in the Impersonal Demand-No Goal condition, paranoid schizophrenics emerged as significantly more avoidant than the other two groups.

Interestingly, as on Personal Disclosure, it is one of the original Shimkunas (1972) conditions which failed to produce the expected result. It too will be discussed further when Goal-Demand conditions are assessed. This result also emphasized the expected nonsignificant

difference found in the "Open Ward" condition. Although from the perspective of Shimkunas' theory the "Impersonal" condition should be the most benign, paranoid schizophrenics were still more avoidant in it than the two other diagnostic groups. The "Open Ward" condition, in which the goal of "remaining on an Open Ward" occurs concomitantly with a "Personal" demand, is the only condition which did not produce a significant difference. This result is all the more important in that Avoidance emerged as a strong area of psychopathology for paranoid schizophrenics in both the Shimkunas (1972) and the current studies. The finding is further highlighted by the significantly lower avoidance occurring in the "Open Ward" condition when paranoid schizophrenics are compared between the "Personal-No Goal" and "Open Ward" conditions (Hypothesis 2).

Only in comparing paranoid schizophrenics between the "Personal-No Goal" and "Discharge" conditions (Hypothesis 3) did an expected difference on Avoidance fail to occur. In this instance there was a small nonsignificant difference in the reverse direction, with paranoid schizophrenics in the "Personal-No Goal" condition remaining more avoidant than those in the "Discharge" condition. It should be noted, however, that the interview response means (Table 25, p. 101, and Figure 2, p. 102, presented these means) in these two cells were the second and third highest among the 12 cell means, exceeded only by the paranoid schizophrenic mean in the "Impersonal" condition. This both underscores the salience of avoidance in paranoid schizophrenic symptom-

atology and suggests that it is consistently, except in the "Open Ward" condition, producing such a high degree of avoidance in itself that it may be unrealistic to expect a further negative threat to increase the level of avoidance beyond that already being demonstrated. Actually, if "Discharge" had any effect at all, it appears to have been very slightly toward less avoidance. However, the paucity of this nonsignificant difference can only be noted, since any further comment would be extremely speculative.

Avoidance was one of only two measures to produce a Topic effect, and these will be considered when the utility of the topics is assessed. Avoidance also proved to be a very fruitful dimension to examine. The rating scale used to assess it was the slightly revised version developed by Shimkunas (1972). Although it was somewhat more difficult to work with than the other scales in both studies, producing interrater reliabilities of .86 to .93 and .79 to .95, respectively, it was still a reliable and effective instrument and is supported for further use.

Suspiciousness

Comparisons on the Suspiciousness measure were made within Goal-Demand conditions for differences between paranoid schizophrenics and the two other diagnostic groups (Hypothesis 1) and within the paranoid schizophrenic Diagnosis for differences between Goal-Demand conditions (Hypotheses 2 and 3). The Suspiciousness measure was expected

to differentiate paranoid schizophrenics from nonparanoid schizophrenics and nonpsychotics in certain conditions. Among Goal-Demand conditions (Hypothesis 1), paranoid schizophrenics were, as expected, significantly more suspicious than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-Discharge condition, with no significant differences occurring in the Personal Demand-Open Ward and Impersonal Demand-No Goal conditions. In addition, there was an unexpected nonsignificant difference in the Personal Demand-No Goal condition, with the difference being in the reverse direction than that expected. This result was accounted for by the high suspiciousness of nonparanoid schizophrenics. Mean interview response ratings were presented in Table 36, p. 119, and Figure 6, p. 120.

Once again it was one of the original Shimkunas (1972) conditions which did not produce the expected result. As on Personal Disclosure, the result emphasizes the impact of the "Discharge" condition. It was achieved both by an increase in suspiciousness by paranoid schizophrenics and a decrease by nonparanoid schizophrenics, with nonpsychotics remaining at the same relatively low level of suspiciousness in the "Discharge" condition compared to the "Personal-No Goal" condition. This result is enhanced by the nearly significant difference ($p < .10$) between paranoid schizophrenics in the Personal Demand-No Goal and Discharge conditions (Hypothesis 3), in which they were more suspicious in the "Discharge" condition than in the "Personal-No Goal"

condition. Although in the predicted direction, the difference between paranoid schizophrenics in the "Personal-No Goal" and "Open Ward" conditions (Hypothesis 2) did not approach significance. However, inspection of the cell means also indicates that paranoid schizophrenics in the "Open Ward" condition had the second lowest level of suspiciousness; only nonpsychotics in the "Open Ward" condition were lower.

Data from the Suspiciousness measure added some further support to the basic hypothesis that the situational context is an important factor in assessing schizophrenic symptomatology. However, the current rating scale, a slightly revised version of that developed by Shimkunas, continued, as in the earlier study, to produce a restricted range of scores, with 0 being the modal score. This restriction prevented a full and adequate assessment of the dimension, as in comparing paranoid schizophrenics between the "Personal-No Goal" and "Open Ward" conditions. Among all the scales used in this study, it appears to have the most limited utility. Clearly, this is an important dimension in assessing psychopathological behavior. As such, the development of a more sensitive instrument for use in observing actual interpersonal behavior will be worth the thought and effort required to develop it.

As a possible defense for the scale as it currently exists, Shimkunas (1972) noted that other dimensions may be more relevant to schizophrenic defensiveness, as well as the fact that the seven patients who refused to participate in his study were paranoid schizophrenics who

might have contributed most to a high paranoid schizophrenic Suspiciousness score. In the current study, 15 patients refused to participate of whom eight were paranoid schizophrenics, three nonparanoid schizophrenics, and five nonpsychotics. We can only speculate about their reasons, but the fact that patients in other diagnostic groups also refused to participate suggests that such refusal cannot be used only to explain the results for the paranoid schizophrenics. It is interesting, however, that nonparanoid schizophrenics, the group having the least number of refusals, had a slightly higher Suspiciousness mean than paranoid schizophrenics.

Delusional thinking

Comparisons on the Delusional Thinking measure were made within Goal-Demand conditions for differences between paranoid schizophrenics and the two other diagnostic groups (Hypothesis 1) and within the paranoid schizophrenic Diagnosis for differences between Goal-Demand conditions (Hypotheses 2 and 3). As expected, paranoid schizophrenics in the Personal Demand-No Goal condition were significantly more delusional in thinking than nonparanoid schizophrenics and nonpsychotics, while there was an expected nonsignificant difference in the Personal Demand-Open Ward condition. However, paranoid schizophrenics in the Personal Demand-Discharge condition were unexpectedly not significantly more delusional in thinking than the two other diagnostic

groups. Delusional Thinking was the only measure which did not produce a significant diagnostic difference in the "Discharge" condition, although even on Delusional Thinking the difference was in the expected direction. Furthermore, paranoid schizophrenics in the Impersonal Demand-No Goal condition unexpectedly emerged as significantly more delusional in thinking than nonparanoid schizophrenics and nonpsychotics. This result has significance in assessing the earlier Shimkunas (1972) study and is considered further in discussing Goal-Demand conditions.

What emerges more clearly in the midst of the somewhat confusing results emanating from the Hypothesis 1 comparisons on Delusional Thinking is that the "Open Ward" condition continued to demonstrate the expected nonsignificant difference among diagnostic groups. This was only partially enhanced, however, by the comparison of paranoid schizophrenics in the "Personal-No Goal" and "Open Ward" conditions (Hypothesis 2). There was a small, nonsignificant difference in the predicted direction. In addition, comparing paranoid schizophrenics between the "Personal-No Goal" and "Discharge" conditions (Hypothesis 3) resulted in a nonsignificant difference in the reverse direction, with paranoid schizophrenics being less rather than more delusional in thinking in the "Discharge" condition than in the "Personal-No Goal" condition. Inspection of mean interview response ratings (Table 39, p. 124, and Figure 7, p. 125, presented these means) suggests several possible explanations. One is that the "Discharge" condition may have been

serving to some extent as a "positive" goal in that the lowest cell means for both schizophrenic groups occur in this condition. An alternative, however, is that paranoid patients may have been using a different strategy than expected. Perhaps the possibility of discharge enhanced their vigilance in such a way that delusions are foregone in favor of concentrating on other defenses. The overall low level of delusional thinking strengthens this possibility. Furthermore, these explanations are not necessarily mutually exclusive. It has already been noted that, for Avoidance, "Discharge" had a slight tendency to produce less psychopathology relative to the "Personal-No Goal" condition. It may be that the combination of a "Personal" demand with the possibility of Discharge produces the greatest conflict for these individuals. Thus, there is an actual decline in some symptomatology (e.g., Avoidance and Delusional Thinking). Decrease in levels of disclosure and increased suspiciousness, rather than being symptomatic of disturbance, may actually be adaptive in this instance. This behavior could not be construed as potentially the most adaptive technique or even as normative compared to other groups. However, in attempting to refine our understanding of schizophrenic symptomatology, it promotes a broader perspective in examining such behavior not simply in a quantitative sense but in terms of the variety of factors working together to produce an array of behaviors. In assessing Hypothesis 1-type comparisons, it has already been noted that Delusional Thinking was the only measure which did not yield

a significant diagnostic difference in the "Discharge" condition. It can also be recalled that the ANOVA yielded a main effect for Goal-Demand conditions, with subjects in the "Discharge" condition being least delusional in thinking and those in the "Open Ward" condition being most so.

These findings continue to support the hypothesis that symptomatology can vary with the situational context such that, even in the presence of a demand for personal self-disclosure, schizophrenic behavior can be decreased by linking the personal demand to a goal in which the subject has some personal investment. The difficulty arises in determining what constitutes the "negative" or "positive" goal. On Delusional Thinking, there is some indication that "Discharge" is functioning more effectively to decrease delusional symptomatology among paranoid schizophrenics, although their behavior in the "Open Ward" condition is also in the predicted direction, both relative to the "Personal-No Goal" condition. It may be that the implied threat of not being able to remain on an Open Ward had special salience for paranoid schizophrenics in a way which produced somewhat greater delusional behavior in this condition. However, with regard to the "Discharge" condition, it is unlikely that what serves as a positive or negative goal in one area of behavior functions in an opposite manner in another area. Rather, a more coherent explanation is required. It has been suggested that the possibility of Discharge occurring together with a "Personal" demand may have promoted greater conflict for paranoid schizophrenics. Consequently, while

"Discharge" may tend to function as a positive goal, behavioral changes fail to reach a significant level. Furthermore, the conflict induced by the situation would also explain the potential adaptiveness of a decrease in disclosure and an increase in suspiciousness.

Data from the Delusional Thinking measure provide some further support for the grand hypothesis. However, the form of the results also stimulated thought about the manner in which the "Open Ward" and "Discharge" concepts could function as goals. As on the Suspiciousness measure, it must be noted that the range of scores on Delusional Thinking was considerably limited with 0 and 1 being the modal scores. In an absolute sense, on the scale used here, no diagnostic group or Goal-Demand condition behaved in a very delusional manner. This must place some limitation on interpreting the results, particularly in light of some of the unexpected findings. The rating scale, a slightly revised version of that developed by Shimkunas (1972), nonetheless warrants further consideration and development. It is important to note the pioneering effort made by Shimkunas in developing instruments to assess schizophrenics' behavior in actual interpersonal situations. Further research will fortunately be able to proceed from this foundation.

Autism

The Autism measure was assessed by comparing paranoid and nonparanoid schizophrenics with nonpsychotics within Goal-Demand

conditions (Hypothesis 1) and by comparing Goal-Demand conditions within the paranoid and nonparanoid schizophrenic Diagnoses (Hypotheses 2 and 3). As expected, paranoid and nonparanoid schizophrenics were significantly more autistic than nonpsychotics in the Personal Demand-No Goal and Discharge conditions, as well as nonsignificantly different in the Impersonal Demand-No Goal condition. However, on this measure only, the Personal Demand-Open Ward condition did not produce the expected nonsignificant result. Instead, paranoid and nonparanoid schizophrenics in this condition emerged as significantly more autistic than nonpsychotics. This result was consistent with the nonsignificant differences produced in comparing the "Personal-No Goal" and "Open Ward" conditions (Hypothesis 2) within the paranoid and nonparanoid schizophrenic diagnoses. For paranoid schizophrenics, this nonsignificant difference was in the expected direction, while for nonparanoid schizophrenics there was a small difference in the reverse direction. In comparing the "Personal-No Goal" and "Discharge" conditions, the results were again nonsignificant. This time, among paranoid schizophrenics, the difference was in the reverse direction, with behavior in the "Discharge" condition being less autistic than in the "Personal-No Goal" condition. Among nonparanoid schizophrenics there was a slight difference in the predicted direction, revealing marginally more autism in the "Discharge" condition.

On the whole, therefore, results on the Autism measure were

inconclusive and lend little support to the grand hypothesis. As predicted, paranoid and nonparanoid schizophrenics were significantly more autistic than nonpsychotics within the "Discharge" condition. However, among paranoid schizophrenics there was a small trend toward less autism in the "Discharge" condition, although not to the extent found in the "Open Ward" condition, both relative to the "Personal-No Goal" condition. Mean interview response ratings were presented in Table 50, p. 142, and Figure 11, p. 143. While these trends were nonsignificant, they lead to the speculation that for paranoid schizophrenics there was a tendency for both "Open Ward" and "Discharge" to serve as "positive" goals. This perspective is consistent with the explanation advanced in discussing Delusional Thinking, in that "Discharge" may have promoted greater conflict for paranoid schizophrenics. The nonsignificant level of decrease in autistic symptomatology in the "Discharge" condition relative to the "Personal-No Goal" condition is thus similar to the pattern on Avoidance and Delusional Thinking. The differences in the three "Personal" conditions among nonparanoid schizophrenics were consistently small and they appear to be behaving quite similarly across these conditions. As seen in other measures, it is clear that paranoid and nonparanoid schizophrenics by no means always perform similarly. In addition, the issue of which goals serve effectively to modify symptomatology appears to vary to some extent with the type of symptomatology being examined.

The rating scale from which Autism scores were derived was reliable, producing high interrater reliabilities in both the Shimkunas (1972) and the current studies (.90 to .93 and .93 to .99, respectively). The scale was a slightly revised version of that developed by Shimkunas and is worth continued consideration in future research.

In summary, results on the Personal Disclosure, Avoidance, and Suspiciousness measures lent strong support to the grand hypothesis that "schizophrenic behavior, as measured by pathological verbalizations in an interpersonal 'clinical' situation, can be modified in the context of greater personal investment in the interpersonal situation." Within Goal-Demand conditions, the "Open Ward" condition received strong support in consistently producing expected nonsignificant differences between diagnostic groups on four of the five measures: Personal Disclosure, Avoidance, Suspiciousness, and Delusional Thinking. Among paranoid schizophrenics this finding was bolstered by comparisons between the "Personal-No Goal" and "Open Ward" conditions. There was significantly less avoidant and nonsignificantly less suspicious, delusional, and autistic behavior in the "Open Ward" condition than in the "Personal-No Goal" condition. Among nonparanoid schizophrenics the only such comparison was made on Autism, which yielded a nonsignificant difference in the reverse direction.

Within Goal-Demand conditions, the "Discharge" condition also received strong support, with significant expected differences occurring

on four measures: Personal Disclosure, Avoidance, Suspiciousness, and Autism, and with a nonsignificant difference in the predicted direction on Delusional Thinking. However, these results were not generally supported by within Diagnosis comparisons between the "Personal-No Goal" and "Discharge" conditions. Among paranoid schizophrenics, the predicted difference of greater psychopathology in the "Discharge" condition strongly approached significance only on Suspiciousness. There were nonsignificant reverse differences on Avoidance, Delusional Thinking, and Autism. An explanation has been advanced to account for these anomalous findings. It may be that the combination of a "Personal" Demand and the "possibility of Discharge" promoted a situation of considerable conflict for paranoid schizophrenics. Unlike the experience of some others (e.g., Braginsky et al., 1969), Discharge, in itself, may have been functioning as a "positive" goal among paranoid schizophrenics. However, it would not appear to have been as potent in this regard as "remaining on an Open Ward." Thus, the differences which were found between the "Discharge" and "Personal-No Goal" conditions were nonsignificant. At the same time, the greater suspiciousness, as well as the lower disclosure of these subjects, may have been adaptive in the "Discharge" condition in a manner consistent both with the explanation being developed and the possibility that certain symptomatology was foregone in order to concentrate on other defenses. It is precisely in a conflictual situation that increased suspiciousness and decreased

levels of personal disclosure would be expected, particularly among individuals with a paranoid orientation. Among nonparanoid schizophrenics the "Discharge"-"Personal-No Goal" comparison yielded a nonsignificant result in the predicted direction.

Strongest support for the grand hypothesis was produced on Personal Disclosure and Avoidance, somewhat less so on Suspiciousness, while Delusional Thinking yielded weaker and more tentative support. The Autism measure proved to be the least fruitful in demonstrating the basic hypothesis of this study.

Utility of the Diagnostic Groups

Three diagnostic groups were examined in this study: paranoid schizophrenics, nonparanoid schizophrenics, and nonpsychotics. Diagnosis emerged as a powerful means of examining the results. The ANOVAs yielded Diagnosis main effects on all five measures. The order was consistent except on Suspiciousness. The typical ranking, from greatest to least symptomatology was: paranoid schizophrenics, nonparanoid schizophrenics, and nonpsychotics. On Suspiciousness, nonparanoid schizophrenics were slightly higher than paranoid schizophrenics, and both were much greater than nonpsychotics. These results are very similar to Shimkunas' (1972), except that nonparanoid schizophrenics were also the most autistic in his study. In assessing only the two "No Goal" conditions, which constitute a replication of the Shimkunas

(1972) study and which were also presented in a separate set of comparisons, diagnostic results produced similar significant main effects for Diagnosis on Avoidance, Delusional Thinking, and Autism. Shimkunas also produced a significant main effect for Diagnosis on Personal Disclosure, which did not occur in the replication comparison in this study. However, the current study yielded a significant Diagnosis main effect for Suspiciousness, while Shimkunas (1972) did not. A consideration of both sets of results demonstrates that the addition of the two "Goal" conditions provided greater clarification of diagnostic differences.

It was noted earlier that previous impression management research had not utilized a paranoid-nonparanoid schizophrenic analysis. The current study strongly supports further use of this method of clarifying which groups of psychiatric patients utilize impression management and under what circumstances. In the current study, paranoid schizophrenics emerged as significantly more avoidant and suspicious with a trend toward more delusional thinking in the Personal Demand-Discharge condition than nonparanoid schizophrenics and nonpsychotics, while they were nonsignificantly more or less avoidant, suspicious, and delusional in thinking than the two other diagnostic groups in the Personal Demand-Open Ward condition. Paranoid schizophrenics were apparently more amenable to wanting to "remain on an Open Ward." This is further supported by their behavior in the "Open Ward" condition compared directly to the "Personal-No Goal" condition. Paranoid schizophrenics were

significantly less avoidant, with a nonsignificant trend toward less suspiciousness, delusional thinking, and autism, in the "Open Ward" condition.

A more fluctuating attitude appeared to exist toward "Discharge" when that condition was compared directly to the "Personal-No Goal" condition. It had been predicted that there would be significantly greater psychopathology in the "Discharge" condition. However, only on Suspiciousness did the results approach significance in this direction. There were nonsignificant results in the reverse direction on Avoidance, Delusional Thinking, and Autism. As previously discussed, this is consistent with Discharge serving as a positive goal, but occurring together with a "Personal" Demand promoting a conflictual situation. This occurred despite the fact that paranoid schizophrenics had been significantly more avoidant and suspicious, with a nonsignificant trend toward more delusional thinking than nonparanoid schizophrenics and nonpsychotics, within the "Discharge" condition itself. The results, taken together, indicate what has been characterized as a conflictual situation. An alternative term which has a somewhat different meaning would label paranoid schizophrenics in the "Discharge" condition as being ambivalent. However, conflict is likely to be a conceptually more accurate description in attempting to define the impact of the "Discharge" condition on paranoid schizophrenics. While both "Discharge" and "Open Ward" could be serving as positive goals, it may also be that paranoid

schizophrenics are more ambivalent about being discharged than about remaining on an Open Ward. Thus, when also faced with a demand for personal disclosure they are able to reduce their avoidant, delusional, and autistic symptomatology only marginally. This could also help explain their greater suspiciousness in both "Discharge" analyses. Their very uncertainty could be stimulating concerns about the purposes of the interview in which they were participating. Unfortunately, previous impression management studies utilizing the Discharge concept did not consider their results according to a paranoid-nonparanoid breakdown, so there is no similar research to call upon to support or question this speculation.

Paranoid and nonparanoid schizophrenics were together compared to nonpsychotics for Personal Disclosure and Autism. They emerged as significantly less disclosing and more autistic in the "Discharge" condition; they were nonsignificantly more or less disclosing in the "Open Ward" condition, but unexpectedly continued to be more autistic than nonpsychotics in the "Open Ward" condition. Inspection of cell means (Table 50, p. 142, and Figure 11, p. 143, presented these means) indicates that both paranoid and nonparanoid schizophrenics were quite similarly more autistic than nonpsychotics in the "Open Ward" condition. Thus, while "Open Ward" had the predicted effect in producing a nonsignificant difference for Personal Disclosure, paranoid and nonparanoid schizophrenics remained more autistic in this condition. This is the

only measure on which the predicted within "Open Ward" diagnostic difference did not occur. It must be noted that the very nature of the goal, "remaining on an Open Ward," could promote some variation among forms of symptomatology. The "Open Ward" condition implicitly included remaining in the hospital. To have eliminated all symptomatology would have been potentially counterproductive. The conflict, as well as the possible ambivalence, induced by the "Discharge" condition, which has already been noted, further amplifies this situation. In the "Open Ward" condition, maintaining a certain amount of symptomatology was presumably necessary in order to justify remaining in the hospital. To suggest, however, that schizophrenics would attempt to do so equally across all forms of symptomatology appears to be practically too complex a strategy and unreasonable. However, suggesting that a particular area of behavior may be utilized for this purpose is similar to an earlier suggestion that paranoids may have foregone certain symptomatic behaviors in order to concentrate on other defenses. For "Open Ward" condition schizophrenics, the choice of autism is reasonable for such a purpose. It is precisely the sort of behavior which hospital staff would agree upon as being symptomatic, and yet would also be likely to tolerate provided it was nondisruptive to the smooth running of the living-working unit or ward.

Nonparanoid schizophrenics emerged as more similar to nonpsychotics than to paranoids in being less avoidant and delusional in

thinking when significant differences or trends occurred in any of the Goal-Demand conditions on these dimensions. It has already been noted that paranoid and nonparanoid schizophrenics were less disclosing in the "Discharge" condition and more autistic in both the "Discharge" and "Open Ward" conditions. An unexpected finding was that nonparanoid schizophrenics as a group emerged as the most suspicious. This resulted in a nonsignificant result in the reverse direction for the prediction which called for paranoid schizophrenics to be more suspicious than nonparanoid schizophrenics and nonpsychotics in the Personal Demand-No Goal condition. It is interesting that Shimkunas (1972) also produced a similar unexpected result, with nonparanoid schizophrenics being slightly more suspicious than paranoid schizophrenics in his "Personal" condition. In both studies, paranoid schizophrenics were nonsignificantly more suspicious in the "Impersonal" condition. In the current study, nonparanoid schizophrenics were nonsignificantly more suspicious in the "Open Ward" condition, while their suspiciousness decreased substantially in the "Discharge" condition, in which the predicted difference occurred with paranoid schizophrenics being significantly more suspicious than the two other diagnostic groups. This is a situation in which "Discharge" appeared to be functioning very differently for paranoid compared to nonparanoid schizophrenics.

The relatively greater suspiciousness of nonparanoid schizophrenics in the "Personal-No Goal" condition in both the current and Shimkunas

(1972) studies, and their overall slightly greater suspiciousness across conditions in this study, is not readily explainable. Shimkunas did not deal with this issue. In addressing the question, it may be useful to bear in mind the restricted range of scores which were used on this measure; that is, no group actually displayed a great deal of suspiciousness. Resolution of this unexpected finding will likely have to await further evaluation with a suspiciousness scale that can yield a wider variation of scores, such that any significant differences would then have greater theoretical and practical meaning.

The nonpsychotics behaved throughout in the expected manner and certainly served as an effective control group. They consistently produced the least amount of overall psychopathology on all five measures. In fact, among the 20 Goal-Demand conditions examined (four Goal-Demand conditions in five measures), in only two instances did they not have the least psychopathological mean score (the Impersonal Demand-No Goal condition for Personal Disclosure and the Personal Demand-Discharge condition for Delusional Thinking), and in both these situations there were no significant differences among the diagnostic groups. The only within diagnosis differences which were assessed for nonpsychotics were on Topic, and those will be considered when Topic is discussed.

Diagnosis emerged as a highly significant factor. Paranoid and nonparanoid schizophrenics were significantly less disclosing in the "Discharge" condition, and more autistic in the "Personal-No Goal,"

"Discharge," and "Open Ward" conditions, than nonpsychotics. Paranoid schizophrenics were significantly more avoidant and delusional in thinking in the "Personal-No Goal" and "Impersonal" conditions, and more avoidant and suspicious in the "Discharge" condition, than nonparanoid schizophrenics and nonpsychotics. Paranoid schizophrenics appear to have strongly perceived "remaining on an Open Ward" as a positive goal with predicted nonsignificant differences in that condition on Avoidance, Suspiciousness, and Delusional Thinking, in comparison with nonparanoid schizophrenics and nonpsychotics, and together with nonparanoid schizophrenics on Personal Disclosure compared to nonpsychotics. In addition, paranoid schizophrenics were significantly less avoidant, with predicted trends toward less suspiciousness, delusional thinking, and autism, in the "Open Ward" condition compared to the "Personal-No Goal" condition.

Paranoid schizophrenics appear to have found themselves in a conflictual situation in the "Discharge" condition. The "possibility of Discharge" seems to have functioned in the direction of being a positive goal but less potently than "remaining on an Open Ward." Occurring together with a "Personal" demand, all comparisons among paranoid schizophrenics between the "Discharge" and "Personal-No Goal" conditions led to nonsignificant differences. Only on Suspiciousness was the difference even in the predicted direction of greater symptomatology in the "Discharge" condition. Thus, because of the apparently conflictual situation

in which they found themselves, paranoids decreased their avoidant, delusional, and autistic symptomatology but manifested a lower level of personal disclosure and greater suspiciousness. Although this suggests an adaptive strategy within the paranoid schizophrenic group itself, their greater maladaptiveness relative to the other diagnostic groups was also demonstrated by the within Goal-Demand condition results. Paranoid schizophrenics were significantly more avoidant and suspicious, with a nonsignificant trend toward greater delusional thinking, than nonparanoid schizophrenics and nonpsychotics, while both schizophrenic groups were significantly less disclosing and more autistic than nonpsychotics in the "Discharge" condition. Nonparanoid schizophrenics did not yield significant differences in comparing the "Personal-No Goal" with either the "Open Ward" or the "Discharge" conditions. They were unexpectedly the most suspicious group. Nonpsychotics were always the least psychopathological group on all measures. The results strongly support differentiating schizophrenics into paranoids and nonparanoids in experimental studies of schizophrenic behavior, adding justification to the recommendations of others (Buss & Lang, 1965; Cash, 1973; Johannsen, 1964; Silverman, 1964).

Utility of the Goal-Demand Conditions

In presenting the results according to the major hypotheses, dependent measures, and diagnostic groups, the Goal-Demand conditions have

also been repeatedly described. An attempt will be made to avoid unnecessary repetition in discussing the Goal-Demand conditions themselves by examining the particular utility of each of the conditions. The Goal-Demand conditions are, of course, a major feature of the current study. To facilitate their assessment, the two "No Goal" conditions, which constitute the replication portion of the Shimkunas (1972) study contained in the current design, will be discussed together; then the "Open Ward" and "Discharge" conditions will be considered.

The Personal and Impersonal Demand-No Goal conditions

When the results were presented in the context of the dependent measures, the discussion of several unexpected results in the "No Goal" conditions was deferred. They will now be considered. The "Personal-No Goal" condition yielded the expected diagnostic differences on Avoidance, Delusional Thinking, and Autism. The predicted diagnostic difference on Personal Disclosure did not reach a significant level, although it was in the predicted direction. The three-factor ANOVA on Personal Disclosure was one of only two which revealed a significant Goal-Demand condition main effect, with the "Personal-No Goal" and the "Impersonal-No Goal" conditions producing the most and least disclosure, respectively; both "Personal-Goal" conditions were in between. Reference to the replication ANOVA (in which only the two "No Goal" conditions were used for data analysis) may be helpful here. The latter also yielded a

significant Condition effect with "Personal Demand" subjects being more disclosing than "Impersonal Demand" subjects. Inspection of individual means presented in Table 22, p. 96 , and Figure 1, p. 97 , confirms that all diagnostic groups were disclosing more in the "Personal" condition, but not in a manner which significantly distinguished them from each other. Shimkunas (1972) had found nonpsychotics to be significantly more disclosing than paranoid and nonparanoid schizophrenics in the "Personal" condition.

The current results do not replicate this finding and thereby raise questions about his conclusion, consistent with Jourard's (1964) theory, that disturbed individuals avoid personal self-disclosure. In fact, the current study finds that schizophrenics, while indeed somewhat less disclosing, were not significantly so compared to nonpsychotics when confronted by a demand for personal self-disclosure in the absence of any positive goal. The same pattern was also true, in this instance as predicted, in the "Open Ward" and "Impersonal-No Goal" conditions. Only in the "Discharge" condition were schizophrenics significantly less disclosing than nonpsychotics. This result provides both support for an impression management explanation and for the utility of using the Discharge concept. If only the two replication conditions were considered, it would be concluded simply that the replication failed to support Shimkunas (1972) and Jourard (1964).

In being able to consider additionally the two conditions in which

subjects were provided with greater investment in the task, it can be seen that schizophrenic subjects became significantly less disclosing than nonpsychotics only in the Discharge condition. Consequently, the Shimkunas-Jourard contention must be revised to note that lower self-disclosure among schizophrenic inpatients is not simply a function of the threat implied by a demand for personal self-disclosure. The possibility of discharge presented to subjects in the "Discharge" condition was the extra dimension required to produce a significant diagnostic difference. With regard to levels of self-disclosure, the possibility of discharge stimulated a more symptomatic approach. An alternative explanation is that schizophrenics may have felt a need to "cover" their personal thoughts and feelings to increase their chances of discharge if they were perceiving it as desirable rather than as undesirable. However, if that is so, they are still operating significantly differently from nonpsychotics, who were consistently the least symptomatic on all measures, and the most disclosing. Thus, even if their rationale were to maximize the chance for discharge, decreasing their self-disclosure would appear to be a maladaptive approach since it gave the interviewer less information on which to make a judgment. Either explanation, however, suggests that schizophrenics were utilizing their decreased self-disclosure to promote an impression to achieve a desired outcome. There is clearly no need to expend such efforts in a situation in which the individual is presented with no personal investment, as is the case in the two replication "No

Goal" conditions. These results also indicate the need to understand better the meaning of psychiatric symptomatology in the context of the situations in which it occurs.

The other unexpected nonsignificant diagnostic result in a "Personal-No Goal" condition, that on Suspiciousness, will not be dwelt upon here since it has already been discussed in assessing the dependent measures and the diagnostic groups, and has greater meaning from those perspectives. Suspiciousness, however, also contained another unexpected situation which is pertinent to this discussion. The three-factor ANOVA yielded a nonsignificant Goal-Demand conditions main effect, but the rank order revealed subjects in the "Impersonal" condition to be the most suspicious. Again, reference to the replication comparison is helpful. Tables 55 and 56, page 150, present the ANOVA summary and means. It did reveal a significant condition main effect, but with subjects in the "Impersonal" condition being significantly more suspicious than those in the "Personal" condition. This is a reversal of the Shimkunas (1972) study, which also produced a significant condition effect but with subjects in the "Personal" condition significantly more suspicious.

Without benefit of the two "Goal" conditions it could be concluded that any demand for self-disclosure is basically threatening to inpatients and as such increases suspiciousness. The restricted range of scores on Suspiciousness in both studies could also be cited as an explanation for the contradictory results. However, when the two "Goal" conditions are

also considered, it is found that subjects in the "Open Ward" condition are the least suspicious, with those in the "Impersonal" condition remaining the most so. Furthermore, the "Discharge" condition emerges as the only one to produce a significant diagnostic difference, with paranoid schizophrenics, as expected, being more suspicious than nonparanoid schizophrenics and nonpsychotics. Comparisons between the "Personal-No Goal" and "Discharge" conditions among paranoid schizophrenics also revealed a trend ($p < .10$) in the direction of more suspiciousness in the "Discharge" condition. The "Discharge" condition demonstrates diagnostic differences which were not revealed in the "No Goal" conditions; the possibility of discharge yielded significantly different behavior between paranoid schizophrenics and the two other diagnostic groups. At the same time, paranoid schizophrenics were least suspicious in the "Open Ward" condition, and the latter produced the least amount of suspiciousness of the four Goal-Demand conditions. It should be noted, however, that nonparanoid schizophrenics remained relatively more suspicious in the "Open Ward" condition even though there was, as expected, no significant diagnostic difference between paranoid schizophrenics compared with nonparanoid schizophrenics and nonpsychotics.

It may be that the hypothesis raised to explain the "Personal-Impersonal" reversal on Suspiciousness in the replication analysis has some validity. Certainly, the restricted range of scores indicates a need for caution in interpreting the results whether only the two

replications or all four of the Goal-Demand conditions are examined. By introducing the two "Goal" conditions, however, it may be seen that the "Open Ward" condition proved to be the least stimulating of suspicious behavior. While the demand for personal self-disclosure emerged as generally not stimulating a great deal of suspicious behavior, introduction of the "Open Ward" dimension reduced it still further, whereas the possibility of discharge yielded diagnostic differences not produced elsewhere. Thus, providing subjects with greater personal investment in the task appears to have altered their behavior in a manner which suggests that it is not only the demand for either personal or impersonal self-disclosure, or even any demand for self-disclosure, which must be considered. The broader situational context must also be assessed in developing a more accurate perspective of the meaning of psychopathological behavior among psychiatric inpatients.

"Impersonal-No Goal" had been expected to be the most benign condition and yield no diagnostic differences. As is already apparent from the preceding discussion of what occurred on the Suspiciousness measure, this expectation was not fully borne out. It is worth noting in passing that this condition was included in the current study primarily for the sake of replication, an all too infrequent event in psychological research. It was not essential to the assessment of the basic questions being raised but seemed to be worth including, at minimal cost and effort, given the scope of the project. It emerged as a fruitful source of data and permitted a

fuller consideration of the earlier Shimkunas (1972) results and of impression management theory.

While Suspiciousness was the only measure to yield a "Personal-Impersonal" replication reversal, it was not the only one to produce other unexpected diagnostic results. These also occurred for Avoidance and Delusional Thinking. No diagnostic differences were predicted, but paranoid schizophrenics were significantly more avoidant and delusional in thinking than nonparanoid schizophrenics and nonpsychotics in the "Impersonal" condition. In themselves, these results provide further reason for questioning the actual meaning of the Shimkunas (1972) study, which emphasized the greater threat of a demand for personal self-disclosure compared to a demand for impersonal self-disclosure. In both "No Goal" conditions, paranoid schizophrenics in the current study were more avoidant and delusional in thinking than the other groups. Any demand for self-disclosure appears to have produced a greater level of avoidance and delusional thinking for paranoid subjects. However, on both measures, there was a nonsignificant diagnostic difference only in the "Open Ward" condition. Consequently, the crucial factor was the presence of a broader goal. That is, paranoid schizophrenics engaged in impression management for the purpose of remaining on an Open Ward. In addition, there was less avoidance and delusional thinking among paranoid schizophrenics in the "Open Ward" condition compared to the "Personal-No Goal" condition, a difference which was significant on

Avoidance and nonsignificant on Delusional Thinking.

Autism was the only measure in which the two "No Goal" conditions results in both the current and the Shimkunas (1972) studies are similar. Even on this measure, however, the replication comparison did not yield a significant condition main effect, although the difference was in the expected direction; that is, subjects in the "Personal" condition were more autistic. In addition, the Shimkunas nonparanoid schizophrenics were the most autistic of the diagnostic groups, whereas paranoid schizophrenics were the most autistic in the current study. This difference is not seen as very crucial.

This consideration of the replication portion of the Shimkunas (1972) study contained in the current study has consistently demonstrated that, while the earlier work appeared to be on the "right track," it requires reconsideration from a broader perspective. Level of disclosure, as well as avoidant, suspicious, and delusional symptomatology compared between schizophrenics and nonpsychotics, was not merely a function of a demand for personal or impersonal self-disclosure. The presence or absence of a broader goal in the form of "remaining on an Open Ward" or "readiness for Discharge" amplified the meaning, in the replication conditions, of failing to achieve expected significant diagnostic differences (Personal Disclosure and Suspiciousness in the "Personal-No Goal" condition), or of obtaining unexpected significant diagnostic differences (Avoidance and Delusional Thinking in the "Impersonal" condition), as

well as the reversal in which "Impersonal" condition subjects were more psychopathological than "Personal" condition subjects (Suspiciousness). The data also indicated the importance of creating a design which permitted an actual replication of the earlier study. Consequently, inconsistencies in the results of the studies and their assessment either from differences in the "No Goal" conditions between the two studies or by reference to the "Goal" conditions within the current study have greater meaning because the methodology was comparable. Differences between subjects in the "Goal" compared to the "No Goal" conditions are more likely to have been the result of greater investment afforded subjects in the two "Goal" conditions.

It is obvious that no adequate consideration of the two replication conditions in this study and their comparison with the Shimkunas results could be presented without frequent references to the two "Goal" conditions which are a unique feature of the current study. To have attempted to do so would have indeed been artificial. The emphasis, however, was on the replication conditions. The two "Goal" conditions will now become the foci of the discussion.

The Personal Demand-Open Ward and Personal Demand-Discharge conditions

The "Open Ward" and "Discharge" conditions emerged as more potent in achieving predicted results than the two replication or "No Goal" conditions. No Diagnostic differences were predicted within the

"Open Ward" condition, since diagnostic groups were expected to behave comparably therein. This was true on four of the five measures: Personal Disclosure, Avoidance, Suspiciousness, and Delusional Thinking. Only on Autism was the expectation not realized. Paranoid and nonparanoid schizophrenics were significantly more autistic than nonpsychotics in the "Open Ward" condition. Within the "Discharge" condition, significant diagnostic results were expected and emerged as predicted on Personal Disclosure, Avoidance, Suspiciousness, and Autism, with a nonsignificant difference in the predicted direction on Delusional Thinking. Within these two "Goal" conditions, then, strong support was demonstrated for the hypothesis that schizophrenics confronted by a demand for personal self-disclosure can behave comparably to nonpsychotics when the demand is linked to remaining on an Open Ward, while they will be more symptomatic when confronted by the possibility of Discharge. These results were all the more meaningful when considered together with the failure to replicate one of the expected "No Goal" condition results on four of the five measures, which was discussed in the preceding section.

The "Goal" condition results in themselves also indicate that schizophrenics are not always reacting simply to the presence of a broader goal. On Personal Disclosure, Avoidance, and Suspiciousness, they are comparable to nonpsychotics in the "Open Ward" condition, and significantly different in the "Discharge" condition (paranoid and non-

paranoid schizophrenics compared to nonpsychotics on Personal Disclosure; paranoid schizophrenics compared to nonparanoid schizophrenics and nonpsychotics on Avoidance and Suspiciousness). This was not true for Delusional Thinking, where there were no significant diagnostic differences in either condition, although it was in the predicted direction in the "Discharge" condition. On Delusional Thinking, both "Goal" conditions apparently served to decrease delusional symptomatology, in that schizophrenics and nonpsychotics behaved comparably. This is all the more striking in that significant diagnostic differences on this dimension emerged in both "Personal" and "Impersonal-No Goal" conditions. Only in the presence of a broader goal did diagnostic groups behave comparably in respect to Delusional Thinking. However, on Autism, paranoid and nonparanoid schizophrenics were significantly more autistic than nonpsychotics in both "Goal" conditions. The failure to achieve the expected results in one of the "Goal" conditions was due, on Autism, to two significant differences, while on Delusional Thinking it was due to two nonsignificant differences. These results, then, also lend some support to the idea that schizophrenics are not reacting mechanistically to the presence of a broader goal, suggesting that symptomatology is changed selectively.

Within "Goal-Demand" conditions, diagnostic comparisons consistently demonstrated the utility of the "Open Ward" and "Discharge" concepts. Additional analysis examining certain within Diagnosis

differences were undertaken to clarify further their relative potency. The "Open Ward" concept received more support for use as a positive goal, whereas the within Diagnosis assessment revealed a more conflictual situation among paranoid schizophrenics in the "Discharge" condition.

Paranoid schizophrenics were expected to be significantly less avoidant, suspicious, delusional in thinking, and autistic in the "Open Ward" condition than in the "Personal-No Goal" condition. The differences were indeed always in the predicted direction but achieved significance only on Avoidance. Thus, some further support was demonstrated for "Open Ward" serving as a goal which led to a decrease in manifest symptomatology. This is consistent with the results of diagnostic comparisons within Goal-Demand conditions except for Autism. On Autism, paranoid and nonparanoid schizophrenics remained significantly different from nonpsychotics in all three "Personal Demand" conditions. Despite that, there was a nonsignificant trend among paranoid schizophrenics to be less autistic in the "Open Ward" condition compared to the "Personal-No Goal" condition. On the whole, among paranoid schizophrenics "Open Ward" functioned consistently to either reduce psychopathology or produce it at a level at least comparable to other diagnostic groups.

Among nonparanoid schizophrenics only one comparison was made between the "Personal-No Goal" and "Open Ward" conditions, and that was on Autism. The reason, it will be recalled, is that nonparanoid

schizophrenics and nonpsychotics were together compared with paranoid schizophrenics on Avoidance, Suspiciousness, and Delusional Thinking. Except for the "Personal-No Goal" condition on Suspiciousness, where the expected diagnostic difference failed to materialize, with nonparanoid schizophrenics being more suspicious than the other groups, the appropriateness of this format was regularly demonstrated. The meaning of the exception on Suspiciousness has already been discussed. On the Autism comparison, a nonsignificant difference in the reverse direction from that predicted emerged, as nonparanoid schizophrenics were actually more autistic in the "Open Ward" condition than in the "Personal-No Goal" condition. This only adds to the failure to accomplish the expected within Goal-Demand condition results on Autism. It is apparent that the Shimkunas "Personal-Impersonal" demand hypothesis continues to be supported with regard to Autism. However, even here there was some measure of difference between paranoid and nonparanoid schizophrenics, as the paranoids were nonsignificantly less autistic in the "Open Ward" condition relative to the "Personal-No Goal" condition, while nonparanoids were nonsignificantly more so.

Paranoid schizophrenics unexpectedly did not emerge as significantly more avoidant, suspicious, delusional in thinking, or autistic in the "Discharge" condition than in the "Personal-No Goal" condition. Suspiciousness was the only measure where the difference was even in the expected direction, and then it actually approached significance

($p < .10$). An explanation for these results was advanced earlier to account for this seeming inconsistency with the strong within Goal-Demand condition diagnostic results. While it may be that paranoid schizophrenics are demonstrating greater ambivalence about Discharge than about remaining on an Open Ward, they actually appear to be placed in conflict by the "Discharge" condition. As a goal, Discharge seemed to be serving to at least marginally reduce symptomatic behavior among paranoid schizophrenics on Avoidance, Delusional Thinking, and Autism. This occurred despite their being significantly more symptomatic than other diagnostic groups on two of these three measures (Avoidance and Autism) in the same "Discharge" conditions. The reverse on Autism is particularly striking because significant diagnostic differences had been achieved in the three "Goal-Demand" conditions. The reverse on Delusional Thinking, on the other hand, is more consistent with the non-significant diagnostic differences in both "Goal" conditions, and the significant diagnostic differences in both "No Goal" conditions.

The function of "Discharge" as an effective negative goal among paranoid schizophrenics must be reevaluated. A more accurate reflection is that, in itself, it is quite capable of distinguishing paranoid schizophrenics or paranoid and nonparanoid schizophrenics from the other diagnostic groups or group. However, there is some tendency for all diagnostic groups to demonstrate reduced symptomatology in the "Discharge" condition, although less so among paranoid schizophrenics.

Consequently, while paranoid schizophrenics also have some desire to seek Discharge and can begin to make some nonsignificant changes in their behavior contrasted to a situation where they are not provided with the possibility of such an outcome, they apparently manifest considerably more conflict in the "Discharge" condition. The strength of the Discharge goal does not sufficiently offset the presence of a "Personal" demand. It may also be that paranoids are more ambivalent about the possibility of being discharged than about remaining on an Open Ward. This ambivalence could constitute an alternative, but less likely, explanation of the results, or it could be operating to enhance the conflict imposed by coupling the possibility of Discharge with a "Personal" demand. Since it is unreasonable to assume that goal valence shifts according to the type of symptomatology being analyzed, the existence of a conflictual situation for paranoid schizophrenics in the "Discharge" condition emerges more strongly as a primary explanation for all the available evidence both within Goal-Demand conditions and within the paranoid schizophrenic diagnosis, as well as across types of symptomatology. Any ambivalence toward Discharge could be operating as a secondary factor. The expected result on Suspiciousness also makes sense in this regard. Given the existence of a conflictual situation in the "Discharge" condition, together with the possibility of some ambivalence towards discharge, it is reasonable that paranoid schizophrenics' suspiciousness is greater in the "Discharge" condition. Similarly, their

decreased disclosure is also understandable.

Among nonparanoid schizophrenics there was only one comparison, on Autism, to assess "Personal-No Goal"-"Open Ward" differences. It yielded a nonsignificant difference in the predicted direction with only marginally greater autism in the "Discharge" condition. The difference is so small as to warrant the conclusion that there was essentially no difference between the two conditions. This was consistent with the unexpected Goal-Demand condition results on Autism. Once again, however, it does point up the somewhat different orientations of paranoid and nonparanoid schizophrenics, since in this instance it was the paranoids who produced a nonsignificant difference in the reverse direction, while the nonparanoids produced a nonsignificant difference in the predicted direction.

The "Open Ward" and "Discharge" conditions were to some extent both supported as concepts demonstrating the effect of a broader goal when linked to a demand for personal self-disclosure. "Open Ward" emerged as a viable positive goal serving to yield comparable results across the diagnostic groups and generally to reduce symptomatic behavior among paranoid schizophrenics in contrast to a situation in which there was no broader goal. On the basis of limited data, the latter effect was not demonstrated among nonparanoid schizophrenics. "Discharge" produced the expected diagnostic differences within Goal-Demand conditions, but did not do so within the schizophrenic diagnoses when the

"Personal-No Goal" and "Discharge" conditions were compared with each other. Paranoid schizophrenics in particular seemed to be experiencing considerable conflict in the "Discharge" condition. As a concept, "Discharge," while regularly producing significant diagnostic differences, apparently did not function as an effective or consistent negative goal; rather, the available evidence suggests that it tended to function more as a positive goal.

Utility of the Topics

Topic effects were not predicted, but they nonetheless emerged on two measures: Avoidance and Delusional Thinking. Since Shimkunas had neglected to perform any analysis for Topic, the topics were thoroughly analyzed on the two measures in which significant main effects occurred. The analyses were performed for separate Diagnoses and Goal-Demand conditions, as well as with Diagnoses and Goal-Demand conditions combined. One topic stood out above all others: Being Rejected by People (BRP). Of the ten significant results, subjects were more avoidant or delusional in thinking on Being Rejected by People on eight of these comparisons. By contrast, subjects were usually significantly less avoidant or delusional in thinking on The Future.

With diagnoses and conditions combined, subjects were more avoidant on "BRP" than on Helping Other People, Love, and The Future. The only significant result among conditions on the Avoidance measure found

subjects in the Impersonal Demand-No Goal condition more avoidant on "BRP" than on The Future; and the only significant result among diagnoses found nonpsychotics more avoidant on Being Good at Things than on Helping Other People and Love.

Seven of the ten results occurred on Delusional Thinking, and six of these involved "BRP." Subjects were significantly more delusional on "BRP" in the following manner: For diagnoses and conditions combined, subjects were significantly more delusional on "BRP" than on Depending on People, Helping Other People, Love, Being Good at Things, Feeling Guilty, and The Future; for the "Open Ward" condition, significantly more than on Depending on People and The Future; for the "Impersonal" condition, significantly more than on Helping Other People and The Future; for paranoid schizophrenics, significantly more than on Depending on People; for nonparanoid schizophrenics, significantly more than on Depending on People, Being Good at Things, Feeling Guilty, and The Future; and for nonpsychotics, significantly more than on Being Good at Things and The Future. The only other significant result was among nonpsychotics, who were more delusional on Getting Angry at People than on Being Good at Things, Feeling Guilty, and The Future.

What emerges from these findings is that all subjects had a tendency to be more avoidant or to be more delusional on Being Rejected by People. This was particularly true for schizophrenics on Delusional Thinking. This is an important finding in reaffirming the historic

Sullivanian concept of the role of rejection in producing disturbed behavior. The least threatening topic appears to have been The Future. The Future is a topic on which an individual is clearly less restricted, with greater potential freedom to create, at least verbally, whatever situation he/she may feel comfortable in describing. It also suggests, however, that considerable therapeutic mileage could be realized by attempting to orient psychiatric patients toward the future, with emphasis on coping behaviors and acquiring specific skills. This is certainly not a new idea but these results perhaps add additional support to such endeavors.

It is interesting that The Future emerged as relatively benign among nonparanoid schizophrenics, in that the very nebulousness of the topic might have been expected to stimulate greater delusional output. Another intriguing finding on Delusional Thinking was that, for both schizophrenic groups, Depending on People significantly stimulated less delusional material than Being Rejected by People. This appears to be a dramatic representation of the importance of these two contrasting forms of human interaction among schizophrenics, and again adds further credence to the function of interpersonal relations in the development of schizophrenic behavior. In these results, the notion of "Depending on People," which implicitly involves trust and some degree of intimacy, did not produce a great deal of delusional material. Considered together with the significantly greater delusional thinking produced by the idea of

rejection, this suggests the ambivalence (one of Bleuler's [1950] classic "Four 'A's'") traditionally associated with schizophrenic symptomatology. The power of rejection for schizophrenics is further noted when the context in which subjects' comments were made is considered. Prior to speaking on the topic themselves, subjects heard the experimenter's views on the topic. Thus, in contrast to being rejected in their immediate interpersonal situation, subjects had been permitted to share the experimenter's own views and were now asked to state their comments on the topic. It may be that, in the short term, the very novelty of such a situation prompted further concern about rejection among schizophrenics. However, their feelings and ideas about "depending on people" were less likely to have been disrupted by the experimenter's accepting and sharing stance. The actual interpersonal situation of the experiment, then, may have facilitated a more appropriate discussion of dependency while momentarily exacerbating fears of rejection when confronted directly by that issue.

While nonpsychotics were consistently the least psychopathological of the diagnostic groups, there were two interesting Topic findings which implicated nonpsychotics only. They were significantly more avoidant on Being Good at Things and less on Helping Other People and Love. This appears to demonstrate the difficulties many individuals with the type of nonpsychotic diagnoses of subjects in this study (e.g., Depressive Neurosis) have in the area of an adequate concept of themselves and their abil-

ities. It also points to their great need for intimacy and "to be helped," which often is expressed in maladaptive and "symptomatic" interpersonal behaviors. A major problem of working with psychiatric inpatient units as systems is the array of diagnoses and symptomatology found therein. Analysis of these topic findings for both schizophrenics and nonpsychotics suggests that therapeutic activities designed to promote greater skill acquisition, both of an interpersonal and of a noninterpersonal nature, would address the needs of a wide range of patients. Obviously, there are different levels of skill, and the appropriate "beginning" level would require some individual assessment.

The second finding specific to nonpsychotics is that Getting Angry at People led to significantly more delusional behavior than Being Good at Things, Feeling Guilty, and The Future. It is unclear whether this delusional behavior about anger was of an "impulsive" and aggressive nature or whether the difficulties associated with expressing it led to "looser" talk. Given the variety of diagnoses represented, it may well be that both factors were operating to produce this group result. However, the issues implied in the topic "Getting Angry at People" have certainly been isolated for important therapeutic considerations in the past, and this finding strengthens such theories. Given that all the nonpsychotics were presumably sufficiently disturbed to require inpatient treatment, it would be interesting to compare a similar group of outpatients on these topics to determine whether anger and a sense of

inadequacy would emerge as significantly as they did here.

On Avoidance and Delusional Thinking, the only measures to produce significant Topic main effects, Being Rejected by People emerged as the most and The Future as the least threatening topics. For schizophrenics, Depending on People stimulated significantly less delusional talk than Being Rejected by People. Nonpsychotics were most avoidant on Being Good at Things, while they were most delusional on Getting Angry at People and Being Rejected by People. The Sullivanian theory of rejection as a significant factor in producing severely disturbed behavior was supported by the topic results. Schizophrenics' ambivalence toward interpersonal relationships was also underscored. Therapeutic activities designed to promote coping behaviors and skill acquisition were indicated as potentially worthwhile for all three diagnostic groups.

Summary of the Major Conclusions

Although the results have already been presented and assessed according to the basic hypotheses, the dependent measures, diagnostic groups, goal-demand conditions, and topics, it may be useful to attempt a brief summary of the major conclusions of this study.

The grand hypothesis that "schizophrenic behavior, as measured by psychopathological verbalizations in an interpersonal 'clinical' situation, can be modified in the context of greater personal investment in the interpersonal situation" has received considerable support. Among

the dependent measures, results on Personal Disclosure, Avoidance, and Suspiciousness provided the greatest degree of support, with less support demonstrated on Delusional Thinking. The Autism measure failed to support the hypothesis in a meaningful way. Avoidance was a particularly strong area of symptomatic behavior among paranoid schizophrenics.

Paranoid schizophrenics were consistently the most symptomatic, followed by nonparanoid schizophrenics and nonpsychotics. The only exception was on Suspiciousness; nonparanoid schizophrenics emerged as slightly more suspicious than paranoid schizophrenics, and both as more than nonpsychotics. There was some similarity in this regard to the Shimkunas (1972) study. However, because of the restricted range of scores in both studies it was not possible to advance a compelling explanation for this finding. Diagnosis, as defined in this study, was a powerful means of assessing the results. Strong support was demonstrated for utilizing a paranoid-nonparanoid dichotomy among schizophrenics in experimental studies.

The two "No Goal" replication conditions did not completely support the earlier Shimkunas (1972) findings. An explanation based solely on the alleged greater threat of a personal than an impersonal demand for self-disclosure was found to be inadequate on all measures except Autism. Jourard's (1964) theory that disturbed individuals are less self-disclosing when confronted by a demand for personal self-disclosure also

was not fully validated. Only when these results were considered together with the two "Goal" conditions did a more meaningful assessment emerge, not only to explain findings within the Goal-Demand conditions but in amplifying diagnostic differences as well.

The "Open Ward" concept received considerable support as a viable positive goal, which resulted in a comparable level of psychopathology between diagnoses, and reduced symptomatology when compared to the "Personal-No Goal" condition among paranoid schizophrenics. The "Discharge" concept failed to be supported as a useful negative goal but contributed to demonstrating that schizophrenics' symptomatology must be considered as at least partially a product of the broader social context in which it occurs. The possibility of "Discharge" appears overall to have functioned more in the direction of reducing than increasing psychopathology. Among paranoid schizophrenics, Discharge also appears to have been perceived to some extent as a positive goal. However, analysis of the results, both within Goal-Demand conditions and Diagnosis, led to the conclusion that the "Discharge" condition itself placed paranoid schizophrenics in a conflictual situation. On the basis of limited data, it cannot be said that nonparanoid schizophrenics felt either negatively or positively about discharge.

Autistic symptomatology was not affected significantly by the availability of broader goals in the context of a demand for personal self-disclosure. It remains unclear whether it was the particular concepts

used here which are ineffective for this area of disturbed behavior or whether the threat implied by a demand for personal self-disclosure has an overwhelmingly greater impact on this realm of behavior. On the basis of results on the other four measures, it is suggested that autistic symptomatology could be significantly decreased in the context of a meaningful goal. An important conclusion of this study, however, is that various dimensions of symptomatology must be considered separately. What mobilizes decreased maladaptive behavior of one type does not necessarily result in a decrease in all types of disturbed behavior. It is not possible to suggest from these results what goals would lead to a significant change in autistic behavior.

The Suspiciousness rating scale produced such a restricted range of scores in both the current and the Shimkunas (1972) studies that the development of a more sensitive measure of this important area of disturbed behavior was recommended. The Delusional Thinking scale also yielded a relatively small range of scores. However, greater confidence was expressed in this measure. The rating scales for Personal Disclosure, Avoidance, and Autism were strongly supported for future use.

Of the three major hypotheses, strong support was demonstrated for Hypothesis 1, which predicted when diagnostic groups would be significantly and nonsignificantly different in the respective Goal-Demand conditions. Hypothesis 2, which predicted that the "Open Ward" condition would yield less psychopathology than the "Personal-No Goal" condition,

received some support among paranoid schizophrenics, and on the basis of limited data was not supported among nonparanoid schizophrenics. Hypothesis 3, which predicted that the "Discharge" condition would produce more psychopathology than the "Personal-No Goal" condition, failed to be supported.

These results and conclusions strongly suggest that schizophrenics utilize impression management techniques. Their social and therapeutic milieus constitute an essential factor in any assessment of their disturbed and maladaptive behavior. Utilization of impression management in "symptomatic" behavior among schizophrenics appears to occur selectively and not mechanistically. Furthermore, the results of this study suggest that when impression management is utilized it is more likely to be in the direction of decreased symptomatology.

Theoretical and Therapeutic Implications

Although theoretical and therapeutic factors have been discussed in the preceding sections, it may be useful to summarize them here much as the major conclusions were just presented. An attempt to relate these findings to certain theories noted earlier will now briefly be made. Since Shimkunas' (1972) theory provided an important stimulus to the current study, it will be considered first. Next, the present study will be placed in the context of impression management theory. Finally, while therapeutic applications were not a basic goal of the study, a few

therapeutic directions emanating from it will be indicated.

Shimkunas' theory

Shimkunas' basic hypothesis was that schizophrenics attempt to prevent others from interacting with them, particularly in the presence of a demand for personal self-disclosure. His theory was derived in part from Cameron (1938, 1947), Haley (1963), Sullivan (1944), and Jourard (1964). Jourard (1964) suggested that a consideration of personal versus superficial disclosure provided a basis for assessing psychological adjustment, and that disturbed individuals tended to disclose little about themselves. Haley (1963) suggested that the disturbed person's symptoms functioned as messages on a covert level of communication. Thus, Shimkunas (1972) expected that

> schizophrenics would be highly avoidant of establishing an intense relationship as defined by meaningful and intimate self-disclosure about a number of important life experiences. Rather than engage in an interaction based on personal disclosure, schizophrenics were expected to redefine the relationship by (a) avoiding the topics via evasiveness or refusal to participate in the experiment, or by engaging in (b) suspicious, (c) delusional, or (d) autistic verbalizations. (p. 198)

Only with regard to Autism did the current study support the original Shimkunas (1972) expectations. It was found that avoidant, suspicious, and delusional behavior was experimentally manipulable by varying a demand for personal self-disclosure with the presence of a broader goal. On Avoidance and Suspiciousness, the expected diagnostic differences failed to be realized in the context of a "Personal-No Goal" demand.

On Avoidance and Delusional Thinking, unexpected diagnostic differences were found in the "Impersonal" condition, while, on Suspiciousness, "Impersonal" condition subjects emerged as significantly more suspicious than "Personal" condition subjects. In addition, the expected diagnostic difference in the "Personal" condition for levels of Personal Disclosure did not materialize. Only when the "Goal-Demand" conditions were also assessed did a coherent explanation for the findings emerge.

In comparing schizophrenics with nonpsychotics, these results failed to support the Jourard (1964) contention that disturbed individuals manifest less self-disclosure. Schizophrenics demonstrated both comparable and significantly different levels of self-disclosure than nonpsychotics. The crucial variable was not a demand for personal or impersonal self-disclosure but the presence of a broader goal (Discharge), which prompted schizophrenics to be significantly less disclosing than nonpsychotics. It appears, then, that schizophrenics are capable of being at least as self-disclosing as nonpsychotics even when confronted by a demand for personal disclosure. In the present study, this was particularly true for paranoid schizophrenics when the demand was linked to remaining on an Open Ward.

The current study's findings do not prompt the need for a reevaluation of Haley's (1963) basic theory, but merely the manner in which Shimkunas (1972) utilized it. The concept that the maladjusted

individual's symptoms function as messages on a covert level of communication is in fact specifically supported and provides an avenue for further theoretical elaboration with which to interpret the results. Paranoid schizophrenics were able to produce significantly or nonsignificantly different rates of symptomatology relative to nonparanoid schizophrenics and nonpsychotics in the three "Personal Demand" conditions. It was the presence of one or both of the "Goals" which accounted for these variations. Both paranoid and nonparanoid schizophrenics functioned in this manner with respect to levels of Personal Disclosure. Thus, schizophrenics manifested control over their behavior in a manner which clearly appeared to be goal-directed. Haley's (1963) theory remains as a useful body of work with which to pursue further impression management research.

While the results and interpretations presented here have been somewhat critical and suggest a reevaluation of some of the basic contentions of the earlier Shimkunas work, the latter nonetheless provided an important foundation from which to proceed. In striving to emulate actual interpersonal situations in its procedure, it continues to serve as a model. The very existence of such a method facilitated coupling it to one which might also be utilized to vary the presence of a goal which could allow subjects greater investment in the experimental task. Shimkunas mentioned the combination of emotionality with interpersonal intimacy in his methodology. With him, it is noted that the task of

delineating emotional versus interpersonal parameters is left to others. Shimkunas' strong findings with regard to autistic symptomatology have not been successfully challenged here. His remains an important contribution to an understanding of schizophrenic behavior.

Impression management theory

This study strongly supports the theory that schizophrenics remain attuned to their social environment and are capable of modifying their behavior in an apparent goal-directed manner to achieve certain social outcomes. As such, it is directly in the tradition of the pioneering work of the Fontana group and the Braginskys' in applying Goffman's sociological theory of impression management to the realm of abnormal psychology.

Because of some of the controversy surrounding impression management theory, it is important to state that this study does not suggest that schizophrenics do not manifest disturbed and maladaptive behavior or that they are "faking" their symptomatology. Rather, the results, taken as a whole, support the perspective that interpersonal relations are indeed a difficult area for this group of individuals. However, in certain situations they are more likely to approximate better social skills than in others. The situations in which they are able to manifest less disturbed behaviors appear to be those in which there is some broader and personal purpose for doing so. As noted in earlier

studies (e.g., Thaw, 1971), they do not simply react to such situations mechanistically, but they do exercise some apparently rational control over their choices.

An important theoretical aspect of the current study is that, when goal-directed behavior occurred, there was a tendency for it to be in the direction of decreased symptomatology. This happened in both "Goal" conditions relative to the "Personal-No Goal" condition, although "Discharge" still functioned generally to produce greater symptomatology in one or both schizophrenic groups relative to nonpsychotics. This subtle distinction further clarifies the role of impression management. It is important to know who constitutes the reference group. If schizophrenic behavior in the "Personal-No Goal" condition were to be totally ignored in assessing the "Discharge" results, it would be assumed, since this expectation usually produced significant diagnostic differences while the "Open Ward" condition did not, that "Discharge" was functioning simply as a negative goal for schizophrenics. In fact, by assessing the results both within conditions and diagnoses, important processes were rendered salient that would not otherwise have invited attention. The most significant outcome of this analysis was to develop a perspective of the influence of the possibility of Discharge on paranoid schizophrenics. Their overall behavior conveyed more of a quality of conflict in the "Discharge" condition than of any other characteristic.

It appears that, while Discharge was functioning to some extent as

a positive goal, it was not as potent in this regard as remaining on an "Open Ward." Consequently, in occurring together with a "Personal" demand, paranoid schizophrenics manifested only marginally less avoidant, delusional, and autistic symptomatology in the "Discharge" condition relative to the "Personal-No Goal" condition. At the same time, this conflictual situation led to less disclosure and greater suspiciousness, which may well have been an adaptive maneuver in attempting to cope with the conflict they appear to have been experiencing.

The tendency toward decreased symptomatology found here can be related to findings noted earlier. Watson (1973) found that impression management among his schizophrenic subjects was in the direction of less socially aberrant behavior. While his methodology weakened the potency of such a finding, it is consistent with the current results. Sherman et al. (1974), in determining that subjects' opinions acknowledged the impact patients believed they had in determining their hospital fates, found that patients were seen as less likable and less desirable as a friend when he/she intended to manage the impression of illness rather than of health. When this is considered in the context of the current study, it is possible to advance a hypothesis that schizophrenics are indeed more likely to employ impression management techniques to exercise appropriate social behavior. This bodes well prognostically and may also mean that most inappropriate and bizarre behavior stems from the actual difficulties in interpersonal or intrapsychic relations these

individuals experience. Clearly, the latter can be interpreted from a wide variety of psychodynamic or behavioral theories. For present purposes, the importance of the hypothesis is in promoting further refinement of our understanding about how schizophrenics may utilize impression management.

While this study lends strong support to an impression management perspective of some schizophrenic behavior, much work remains to be accomplished. For example, one element of future research will be to establish more definitively the currently existing goals of patients in particular settings. This will promote the development of not only our theoretical framework but assessment of the potential adaptiveness of such goals, and the skills being used to achieve them in the larger world. This format for continued investigation can stimulate a therapeutic approach in which patients' existing skills and strengths are considered, among which impression management and goal-oriented techniques may often be one component, and utilized as a foundation for a more adaptive and satisfying life-style. To achieve maximum theoretical and therapeutic benefit, researchers must also be prepared for increased collaboration and a cumulative perspective in their experimental enterprises, so that our understanding can grow in an orderly and systematic manner.

Therapeutic implications

Notwithstanding the fact that therapeutic applications have not been

the focus of this study, several therapeutic indications have emerged from the results. The most basic relationship to treatment stems from the view of individuals, who are labeled as schizophrenic, which emerges from these findings. Because schizophrenics confront us with much of the most bizarre and maladaptive behavior known to human beings, there is often a compelling tendency to focus strictly on the process as a "disease" in which the abnormality is emphasized. Equally (or perhaps more) important, for therapeutic intervention, is an understanding of the skills and strengths of such individuals. The theoretical perspective which is supported here and the research itself can contribute to introducing a more balanced perspective of schizophrenia. That is, it encourages an approach in which the "saner" as well as the "crazier" behavior is assessed. It does not disregard the difficulty which attends this task. However, attention to processes which underscore the purposefulness of schizophrenic behavior can lead to a broader concept of how schizophrenics function socially. It is extremely important to be aware of how goal-directedness, as an element in interpersonal relationships, may be serving to decrease symptomatic activity when meaningful goals are available in the context of such relations. By no means is such a perspective readily observable even for sensitive and seasoned mental health professionals. It is one of the functions of clinical research to stimulate it. For example, to be aware that schizophrenics' symptomatic behavior decreased in a goal-oriented situation compared to a nongoal-

oriented one, despite their being significantly more symptomatic than nonpsychotics in the goal-oriented situation, may be difficult for mental health workers to perceive unless they are attuned to this issue in advance. By being so attuned, however, they are in a position to support and maintain therapeutic growth maximally.

Several specific indications, which can be mentioned briefly, emerged from the data. Paranoid schizophrenics' greater ambivalence toward Discharge points to the need not only for exploration of their concerns in this regard but to careful attention to discharge planning itself. This group should be involved openly in their own discharge planning which could be carried out on a graduated basis. It is precisely in this type of process that therapists must attend to the manner in which their schizophrenic patients can exercise reasonable control over their lives and develop the skills necessary to accomplish goals which are both personally and socially acceptable. In assessing the Topic effects, coping behaviors and skill-acquisition were identified as areas which can and already do serve as the foundations of a basic therapeutic program in multi-diagnostic facilities.

The Topic differences also underlined and supported the theoretical perspective of those who have pointed to the basic conflict many schizophrenics experience in interpersonal relationships, which has been labeled in a number of ways. It was seen here by the threat experienced by "Being Rejected by People" in contrast to "Depending on People."

This element must be considered in developing effective treatment responses whether from behavioral or dynamic backgrounds. At the same time, the apparently more benign status of The Future suggests that some clear future orientation as part of a therapeutic process may be worthwhile. It is likely that as "the future" is approximated its status as a relatively nonthreatening focus may decrease. Nonetheless, this is something with which both therapist and patient could attempt to deal and facilitate emergence, in the present, of important therapeutic issues.

In concluding this section and the study, it is worth recalling Klein and Fontana's (1969) admonition to themselves and others, clinicians as well as researchers, laboring in the domain of psychopathology. They maintain that the thrust of efforts emanating from a sociopsychological perspective is to develop new directions in clinical practice. It should lead us to examine the current allocation of resources and institutional organizations with one possible outcome being the establishment of parallel programs, perhaps working from different perspectives, to evolve appropriate treatment modalities to meet the varying needs of the groups and populations served. They caution against using such a rationale to establish a type of "track system" ideology which could undermine some patients' expectations. Certainly, a good deal has occurred, in the six years which have ensued since their remarks were originally made, toward the implementation of such a system. The direction it points to, however, bears repeating. It also promotes a

certain humility which is appropriate to all who work within certain defined theoretical and clinical orientations. With the need for a variety of perspectives likely to remain far into the foreseeable future, we must also sharpen our own collaborative skills to facilitate the evolution of an integrated body of knowledge.

APPENDIX A

RESEARCH PROTOCOLS SUBMITTED TO HALL INSTITUTE RESEARCH AND EXECUTIVE COMMITTEES

Pierre L.-J. Ritchie, Psychology Intern
William S. Hall Psychiatric Institute
Columbia, South Carolina
March 4, 1974

RESEARCH PROTOCOL

I. Title of Project: "The Influence of the Interviewer's Set on Pathological Verbalizations among Schizophrenics and non-Schizophrenics"

II. Investigator: Pierre L.-J. Ritchie, B.A. (Honours) McGill University; Ph.D. program in Clinical Psychology, Duke University; Psychology Intern, William S. Hall Psychiatric Institute.

Collaborator: Anna Stout, M.A. Research Resource Associate, Clinical Psychologist MA, William S. Hall Psychiatric Institute.

III. Research Design:

a. Background information:

Shimkunas (1972) maintains that a demand for intimate self-disclosure produces a significantly higher rate of pathological verbalizations among schizophrenics than among nonschizophrenics. He suggests that his results support the interpersonally oriented concept that the bizarre thought processes of schizophrenics are caused and

maintained by severely disturbed interpersonal relationships. He noted, however, that a major shortcoming of experiments demonstrating the inferiority of schizophrenics vs. normals on tasks involving social stimuli is the irrelevance of their experimental designs to the real-life experiences of schizophrenics. Consequently, Shimkunas developed a more relevant paradigm to test the hypothesis that schizophrenics evidence bizarre and inappropriate language in order to escape intense interpersonal discourse, thus avoiding normal interpersonal relationships. The research paradigm was based on the theoretical assumptions of Haley (1963) and Jourard (1964). Haley suggests that communication is the basis of the definition of interpersonal relationships in which an individual's message sets the parameters for his interaction with another person. Jourard maintains that a consideration of personal vs. superficial disclosure provides the basis for understanding communication. Accordingly, willingness to disclose intimate feelings and experiences is tantamount to psychological adjustment. Hence, Shimkunas presented Ss with either a demand for personal or impersonal self-disclosure.

The current proposal suggests that Shimkunas' work needs to be reconsidered according to another orientation. The relative importance of a demand for intimate self-disclosure needs to be tested in light of the purposefulness of schizophrenic behavior. Braginsky, Braginsky, and Ring (1969), in demonstrating that schizophrenic behavior can be manipulated, provide evidence for this concept. One such manipulation involves connecting the consequences of the S's behavior to a positive or negative goal. Inasmuch as the Ss produced aberrant behavior in situations in which they either had little personal investment or in which they perceived that more normal behavior would result in a negative outcome, and more normal behavior where they believed it would result in a positive outcome, the Braginsky results support the idea that schizophrenic behavior is both purposeful and manipulable experimentally.

b. The major hypothesis suggested here is: Schizophrenic behavior, as measured by the rate of pathological verbalizations, in response to a demand for intimate self-disclosure, can be modified by linking the demand to a positive or negative goal, supporting the concept of schizophrenic behavior as purposeful. This major hypothesis may be divided into two parts: One, a demand for personal self-disclosure linked to a positive goal should lead to a decrease in the rate of pathological behavior. Two, a demand for personal self-disclosure linked to a negative goal should lead to an increase in pathological behavior. The proposed design permits a full replication of the Shimkunas study plus the addition of positive and negative goal conditions. Hence, there are three Personal Demand conditions and one Impersonal

Demand condition. The design also permits a further evaluation of the importance not only of making the social stimuli relevant to the S's everyday experience but of providing the S with a degree of personal investment in responding to these relevant stimuli.

	Paranoid Schiz.	Nonparanoid Schiz.	Non-psychotic
Personal Demand--Positive Goal			
Personal Demand--Negative Goal			
Personal Demand--No Goal			
Impersonal Demand--No Goal			

c. Method:

Subjects

It is proposed to have 40 Ss in each of the three diagnostic groups--paranoid schizophrenic, nonparanoid schizophrenic, and nonpsychotic, making for 10 Ss per cell and a total of 120 altogether. Schizophrenic Ss are divided into paranoid and nonparanoids, following Shimkunas, who cited increasing evidence (Silverman, 1964) that they show basic differences in behavioral style and because a paranoid orientation was assumed to have a salient effect on interview behavior. A major reason for retaining this division is to permit as full as possible a replication of Shimkunas' design within the proposed design, thus facilitating a more thorough evaluation.

Ss will initially be selected according to their primary diagnosis in which it is presumed that the criteria established by DSM II is used as the standard. A further check will be made in reviewing the available information in the S's record according to the following three operational definitions:

1. Nonpsychotics--The primary diagnosis is nonpsychotic, being in the neurotic disorder (300), personality disorder (301), or adjustment reaction (307) categories. Specifically, there is to be no mention of schizophrenia in their record.

2. Paranoid Schizophrenics--The primary diagnosis is schizophrenia (295) except, of course, for 295.8, schizophrenia, childhood type. The current chart notes must indicate the presence of delusions of grandeur, persecution, reference, or control. This is the same criterion as noted by Shimkunas for this category. It is probable that the presence of such symptomatology would have resulted in a diagnosis of schizophrenia, paranoid type (295.3).

3. Nonparanoid schizophrenics--The primary diagnosis is schizophrenia with no indications of a paranoid orientation as established above.

Neither patients with organic brain syndromes nor those where mental deficiency is indicated will be included. In addition, the standard control variables will be attended to. These include Age, Sex, Race, Education, Number of Hospitalizations, Years since First Hospitalization, and Length of Current Hospitalization. Given the experience of past investigators, it is quite likely that the diagnostic groups will not be matched for Number of Hospitalizations and Years since First Hospitalization as well as Length of Current Hospitalization. The latter was, however, comparable across diagnostic groups in the Shimkunas study.

Disclosure Conditions

It is proposed that the Personal and Impersonal Stimulus Disclosures used by Shimkunas be retained, including the method of presenting them on tape. They were extensively tested by Shimkunas to verify the degree of differences between them. Thus, the manipulation of the interpersonal relationship will be identical to that used by Shimkunas. It is effected by E's disclosure of his feelings and experiences on eight topics in either 1) a personal and intimate or 2) an impersonal and superficial manner which S is to subsequently model. Both length of presentation time and content were matched. (Please refer to Appendix Dfor the complete stimulus disclosures.)

The goal manipulation can be achieved by modifying the introductory statement to be made by E. E would use the standard introduction for Personal and Impersonal Demand/No Explanation conditions. For the other two conditions, in which the purpose of the interview is linked to a personal outcome for the S, E will note that in addition to studying different ways of interviewing he will also be assessing either 1) S's ability to remain on an Open Ward (Positive Goal) or 2) his readiness for Discharge and returning to the community (Negative Goal). The format of the goal manipulation is consistent with one of

the original Shimkunas aims of using social stimuli that are relevant to the real-life experiences of the Ss. The current goal manipulation carries the idea one step further. Not only are the interpersonal elements from the Shimkunas study retained, but Ss in the goal conditions are provided with explanations giving them a direct stake, that is, personal involvement in their performance. At that point, they are not merely engaged in an endeavor that has no visible real-world meaning; their performance assumes a significance directly relevant to their own lives. Hence, positive results would add credence to the view that schizophrenic patients are quite capable of making meaningful choices, such as about the kind of life style they prefer. Support for using the Open Ward and Discharge as appropriate Positive and Negative goals is derived from Braginsky, Braginsky, and Ring (1969).

Procedure

Ss will be selected according to the criteria outlined earlier and randomly assigned to the goal and disclosure conditions. Ss will be scheduled in advance for an appointment. Insofar as possible, the same office will be used for all Ss. Ss will be seated across a desk from the E, who will be blind to the patient diagnosis and the general experimental design. Ss will be exposed to their demand and goal manipulations according to a prearranged schedule. On the desk will be two tape recorders.

Following Shimkunas, each S will be given the Vocabulary subtest of the Wechsler Adult Intelligence Scale (WAIS; Wechsler, 1955). The prorated IQ based on this measure serves as a control for intelligence and helps to establish rapport with the S.

After this, the instructions presented to Ss in the two No Explanation conditions will be identical to those used in the Shimkunas study. (Please refer to Appendix C.) In the Positive/Negative goal explanation conditions, the introduction will be modified. At the outset, the S will be told that E is interested in two things, one being different ways of interviewing people. The second will be an interest in assessing either 1) S's ability to remain on an Open Ward, or 2) S's readiness for Discharge and a return to the community. The second and third sentences of the fifth paragraph will be omitted from E's introduction in these conditions. An additional comment will be included whereby E notes that he is doing this for his own research but that his recommendation and a full report of his findings will be given to S's doctor. Thus, E would say:

1. I am interested in determining your ability to remain on an Open Ward.

2. I am interested in determining whether you are ready for Discharge and a return to the community.

Then, E would go on to say in both conditions:

> I am doing this in the context of my own research. However, I shall give my recommendations and a full report to your doctor.

At that point E would proceed to carrying out the remainder of the introduction beginning with the second sentence of the first paragraph, leaving out only the second and third sentences of the fifth paragraph. Following the instructions, E will turn on the recorder containing the disclosure statements and repeat the procedure outlined in the instructions to Ss for all eight topics. Shimkunas noted that, although E's disclosures were taped, Ss related to the E as though he was communicating directly.

d. The estimated time for this project is five months, with project completion anticipated by September, 1974. The cost of this project will be minimal, utilizing materials already available in the psychology office or the investigator's own possession. No William S. Hall Institute funds are required.

IV. Human subjects will be used in this research project. All data will be coded and only the investigator will have identifying material. Anonymity is assured in the reporting of this project. No risk is estimated for the Ss who participate in this study. Informed consent will be secured. Please refer to Appendix A1 for the enclosed consent form.

V. The relevancy of this project is related directly to expanding scientific understanding of the behavior of individuals who come to be designated as mentally ill. This study is particularly concerned with the social setting in which such behavior occurs. It seeks to expand on already published results. The investigator considers this to be an essential task of the current study. Thus, both replication and amplification are facilitated by this work. As noted earlier, a major shortcoming of research demonstrating the inferiority of schizophrenics vs. normals on tasks involving social stimuli is the

irrelevance of their experimental designs to the real-life experiences of schizophrenics. Thus, Shimkunas developed a more relevant paradigm to test the hypothesis that schizophrenics evidence bizarre and inappropriate language in order to escape intense interpersonal disclosure, and avoiding normal interpersonal relationships. The current study suggests Shimkunas' work should be reconsidered. The relative importance of a demand for intimate self-disclosure needs to be tested in light of purposefulness of schizophrenic behavior.

The study outlined here is undertaken as part of the investigator's dissertation research for the Ph. D. degree at Duke University. This proposal has been submitted to and approved by the investigator's doctoral committee at Duke University. The committee is composed of the following persons:

Chairman: Dr. Robert C. Carson, Professor and Director of Clinical Training, Department of Psychology, Duke University.

Dr. William Eichman, Professor, Department of Psychology, University of North Carolina (Chapel Hill)
Chief, Psychology Service, John Umstead State Hospital.

Dr. Robin Robinson, Assistant Professor, Department of Psychology, Duke University.

Dr. W. Derek Shows, Director, Psychology Internship Program, Duke University Medical Center.

Representative of Minor Field: Dr. Raymond Gavins, Associate Professor, Department of History, Duke University.

APPENDIX A1
CONSENT FORM FOR RESEARCH STUDY ON INTERVIEWING
William S. Hall Psychiatric Institute

The staff of the William S. Hall Psychiatric Institute is conducting a research study examining different ways of interviewing people. The information will be obtained through an actual interview with a member of the staff. This information will be coded and subjected to statistical analysis. There will be no disclosure of your name or no identifying data released on you in reporting the results of this study in professional or scientific literature. The interview will require approximately one hour and will involve essentially no discomfort or risk for the participant. As the purpose of this study is research oriented, no immediate direct benefit from participation can be expected by the individual; however, the individual may take satisfaction in realizing he/she is contributing to a scientific study. You may withdraw your consent and discontinue participation in this study at any time without penalty. We shall be pleased to answer any further questions you may have concerning your involvement in this research study.

I, ________________________________, agree to participate in the research study which is described above.

Date: ____________________

____
Signature of Participant

____
Signature of Witness

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Wechsler, D. Manual for the Wechsler Adult Intelligence Scale. New York: Psychological Corporation, 1955.

APPENDIX B

FINAL CONSENT FORM

Consent Form for Research Study on Interviewing (274-19)*
William S. Hall Psychiatric Institute

The staff of the William S. Hall Psychiatric Institute is conducting a research study examining different ways of interviewing people to see if our methods of interviewing can be improved. The information will be obtained through an actual interview with a member of the staff. This information will be coded and studied carefully. There will be no disclosure of your name or no identifying data released on you in reporting the results of this study in professional or scientific literature. The interview will require approximately one hour and will involve essentially no discomfort or risk for the participant. As the purpose of this study is research oriented, no immediate direct benefit from participation can be expected by the individual; however, the individual may take satisfaction in realizing he/she is contributing to a scientific study. You may withdraw your consent and discontinue participation in this study at any time without penalty. We shall be pleased to answer any further questions you may have concerning your involvement in this research study.

I, ______________________________, agree to participate in the research study which is described above.

Date: ____________________ ______________________________
Signature of Participant

____
Signature of Witness

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*This is the number assigned to this project by the Research Committee, William S. Hall Psychiatric Institute.

APPENDIX C

INSTRUCTIONS TO SUBJECTS

1. Instructions for Subjects in Personal Demand-No Goal and Impersonal Demand-No Goal Conditions

I am studying different ways of interviewing people. When somebody is interviewed, either for a job or by a doctor, the interviewer asks the questions and the person answers them. That way the interviewer finds out things about the person, but the person doesn't get to know much about the interviewer.

I would like to find out if the interview might work better if I told the person I was interviewing how I felt about the topics of the interview, before I asked him to say something about them.

That is what we are going to do today. I will ask you to tell me about your experience with a number of different topics. I would also like you to tell me your feelings and attitudes about that topic. Before you do that, however, I will talk about each topic myself, and tell you what my feelings and attitudes are about it.

Since I will be interviewing a large number of patients in this manner, I have tape-recorded my own views on each topic. That way, each patient will hear what I have to say in exactly the same way. I will give you a card that has the topic printed on it. Then I will turn on the tape recorder and you will hear me talk about it. Right after I finish, I will turn on this other recorder, and then you should start talking about the topic yourself. You can spend about four minutes on each one.

I have to record what you say because that is the only way I can analyze the interviews later on. However, no one but myself and my research assistants will have access to your comments, and the tape cannot be identified because your name will not appear on it--only a code number. Therefore, you can feel free to say whatever comes to your mind.

Before we start, let me remind you to listen carefully to what I have to say about each topic. After I have finished, you tell me your own experiences about it, what it made you think about, and how it made you feel--just the same way that I did. I will signal you by raising my hand a few seconds before the 4 min. is up. This will give you a chance to finish whatever you have to say. If you finish before the 4 min. is up, we can go on to the next topic.

Please do not ask any questions once we have started. Do you have any questions now?

2. Instructions for Subjects in Personal Demand-Open Ward Condition

I am studying different ways of interviewing people, and I am interested in determining your ability to remain on an Open Ward. I am doing this in the context of my own research. However, I shall give my recommendations and a full report to your doctor.

When somebody is interviewed, either for a job or by a doctor, the interviewer asks the questions and the person answers them. That way the interviewer finds out things about the person, but the person doesn't get to know much about the interviewer.

I would like to find out if the interview might work better if I told the person I was interviewing how I felt about the topics of the interview, before I asked him to say something about them.

That is what we are going to do today. I will ask you to tell me about your experience with a number of different topics. I would also like you to tell me your feelings and attitudes about that topic. Before you do that, however, I will talk about each topic myself, and tell you what my feelings and attitudes are about it.

Since I will be interviewing a large number of patients in this manner, I have tape-recorded my own views on each topic. That way, each patient will hear what I have to say in exactly the same way. I will give you a card that has the topic printed on it. Then I will turn on the tape recorder and you will hear me talk about it. Right after I finish, I will turn on this other recorder, and then you should start talking about the topic yourself. You can spend about four minutes on each one.

I have to record what you say because that is the only way I can analyze the interviews later on.

Before we start, let me remind you to listen carefully to what I have to say about each topic. After I have finished, you tell me your own experiences about it, what it made you think about, and how it made you feel--just the same way that I did. I will signal you by raising my hand a few seconds before the four minutes is up. This will give you a chance to finish whatever you have to say. If you finish before the four minutes is up, we can go on to the next topic.

Please do not ask any questions once we have started. Do you have any questions now?

3. Instructions for Subjects in Personal Demand-Discharge Condition

I am studying different ways of interviewing people, and I am interested in determining whether you are ready for discharge and a return to the community. I am doing this in the context of my own research. However, I shall give my recommendations and a full report to your doctor.

When somebody is interviewed, either for a job or by a doctor, the interviewer asks the questions and the person answers them. That way the interviewer finds out things about the person, but the person doesn't get to know much about the interviewer.

I would like to find out if the interview might work better if I told the person I was interviewing how I felt about the topics of the interview, before I asked him to say something about them.

That is what we are going to do today. I will ask you to tell me about your experience with a number of different topics. I would also like you to tell me your feelings and attitudes about that topic. Before you do that, however, I will talk about each topic myself, and tell you what my feelings and attitudes are about it.

Since I will be interviewing a large number of patients in this manner, I have tape-recorded my own views on each topic. That way, each patient will hear what I have to say in exactly the same way. I will give you a card that has the topic printed on it. Then I will turn on the tape recorder and you will hear me talk about it. Right after I finish, I will turn on this other recorder, and then you should start talking about the topic yourself. You can spend about four minutes on each one.

I have to record what you say because that is the only way I can analyze the interviews later on.

Before we start, let me remind you to listen carefully to what I have to say about each topic. After I have finished, you tell me your own experiences about it, what it made you think about, and how it made you feel--just the same way that I did. I will signal you by raising my hand a few seconds before the four minutes is up. This will give you a chance to finish whatever you have to say. If you finish before the four minutes is up, we can go on to the next topic.

Please do not ask any questions once we have started. Do you have any questions now?

APPENDIX D

PERSONAL AND IMPERSONAL STIMULUS DISCLOSURES

Algimantas M. Shimkunas, Ph. D.
University of Missouri
Columbia, Missouri
January, 1972

Personal Disclosures

Depending on People

I want to be an independent person more than anything in the world, but I keep finding that that isn't true of me at all. The fact is that I'm constantly looking for somebody to depend on, somebody to make my decisions for me and take care of me.

When I was growing up, my mother hardly ever let me do things on my own. She would always decide what I should do and would try to run my life. I guess she desperately wanted to protect me from the world.

But even now I have to ask people--either my friends or the people I work with--if something I decide on is all right. I guess I'm afraid of making mistakes. It just tears me to pieces to do the wrong thing and make a mess out of my life.

I would just feel absolutely wonderful if I didn't have to depend on people so much. I would feel so tremendous if I could just be completely on my own. But I've just got to have people, I--I need somebody to lean on. I'm terrified of having to be all alone in the world.

Getting Angry at People

When I'm angry at somebody it's hard for me to know what to do about it. There was one time when I was in a group discussion and every

time I told my real feelings about something, this one guy would make hateful, cruel remarks about what I would say, and he'd keep giving me this ugly, dirty look, for no reason at all. He really made me feel uncomfortable in front of all the other people; he made me feel like a real fool.

I really despised him for doing that to me; I hated his guts, and I really wanted to get at him and hurt him somehow. I was scared to death that I could feel that way, but I could have killed that dirty bastard for what he did to me.

Helping Other People

I like to do things for other people. A friend of mine had a flat tire last winter when it was about 10 degrees above zero. While he didn't ask me for help, I went outside anyway and spent a half-hour changing his tire. I feel like that's one way I can really get close to people, by helping them when they need me. It's terribly hard for me to find ways to get people to give me affection and to be kind to me. It's hard to really feel that I can touch them deeply with my emotions, to make them feel that I really like them and need them as friends.

But helping people is not the best way for me to feel close in my relationships with them and feel like I'm really a part of them. But it's better than being all alone and having nobody. It's terribly hard for me to give myself to them more directly.

Love

The one thing that I want most out of life is to be able to really love somebody. It's been so hard for me to find somebody who would really love me and who I could love completely.

I was married once, but we just seemed to drift apart. She wouldn't have anything to do with me at all; she couldn't even stand to be around me. She made me feel like nothing, like I was a worthless crumb. I feel that it isn't worth it to really give myself and then to be stepped on by somebody I really love.

I've found someone else now who really loves me very tenderly and cares about me. But sometimes I get terrified at the thought that I could lose her too. Then I would have nothing; I would be nothing.

Being Good at Things

One thing that really bothers me is that I'm a miserable failure at the things I try to do. When I was growing up, I was always the very last one to be asked to be on a team--baseball, football, or any other kind. I was totally worthless when it came to sports, and it made me feel just rotten inside when everybody else was asked first. They only let me play because they were guilty about making me feel even more miserable and worthless.

I always thought that nobody could be as hopeless as I was. I was always at the bottom in whatever I did. It made me feel that I was utterly worthless as a person. But I have to think that I'm good at least at one thing, or I can't see why I should go on living. I don't even want to remember times like those because it tears me all up inside.

Being Rejected by People

It really hurts me deeply when people don't want to have anything to do with me. Just recently, some real close friends of mine went to a party and didn't ask me if I would like to go with them. I heard them say that--that I was boring and dull and no fun to be with. They didn't want me to go at all; they didn't even care about me. They really made me feel unwanted and alone; just useless and heartsick. Even my friends don't want me or care about me.

If my best friends feel that way, what good am I--I must be a no-good, worthless bum. There must be something really wrong with me. How can anybody like me after that?

Feeling Guilty

Ever since I was a little kid, I've always felt terribly guilty about the things I've done. Some people seem to be able to do whatever they want; they do things only to make themselves happy or get ahead of the other guy. They're not interested in other people or in what they want. I can't seem to do that. Anytime I do something behind a person's back or if I tell them a lie, I really feel rotten about it. Sometimes I do things that are really selfish or inconsiderate; then I worry myself sick and wonder, how could I have done such an awful, sinful thing?

At times I really get dejected and terribly depressed. I feel like I can't be the kind of person I want to be. I just want to be fair to people. But no matter how hard I try, I keep doing things that make me hate myself, really evil things.

The Future

The future really frightens me. I just never know what is going to happen. Even though I can usually handle things that come up, I'm always afraid of what terrible thing will happen next because I might be completely unable to face it.

Anything could happen to me, tomorrow or the next day. My mother could die; I could get cancer or be in a horrible accident; I could lose my job and starve or something. I sit up nights worrying about what I would do. What if I just couldn't handle it? I might just give up. I would be helpless, and alone, and nobody could help me or do anything for me. That's the thing that really terrifies me--feeling completely helpless and just falling apart.

Impersonal Disclosures

Depending on People

It seems that most people would like to be pretty independent, but they often find that that isn't necessarily true all the time. The fact is that they're always looking around for somebody to help them do things and help them figure things out.

While they're growing up, their relatives don't always let them do things on their own. They appear to decide on what the kids should do and often help them with their problems. It seems that they like to see things go a little easier for their children.

But even after they're grown up, most people often ask others--either their friends or the people they work with--if something they decide on seems all right. It seems like they're worried about slipping up on something maybe, or making some error.

They probably wouldn't mind it if they didn't have to depend on people so much, and they would probably like it better if they could be more on their own. But it seems like they need to get help from other people; maybe they like to have somebody around. They appear to be somewhat concerned about being by themselves without others to help.

Getting Angry at People

When people are angry at somebody, it seems hard for them to know what to do about it. Once somebody was in a group discussion, and every-time he gave his opinion, this one guy would make remarks that weren't very nice about what was said, and he appeared to give him a cross look

for no reason. He appeared to make this person seem uncomfortable in front of the group; he seemed to make him feel bad.

This person seemed rather displeased with this other guy. He didn't think much of him, and it appeared that he might want to do something to him. But he seemed to be uneasy about his opinions of the other guy. Anyway, he might have wanted to tell the other guy that he didn't like what he did.

Helping Other People

Most people like to do things for other people. There was somebody who had a flat tire last winter when it was about 10 degrees above zero. While he didn't ask for any help with it, a friend of his went outside anyway and spent a half-hour changing his tire. It seems like that's one way to be friendly--by helping others. It seems to be rather difficult to find ways for people to get others to do the things they'd like them to do, and to be nice to them. Many people seem to think that it's hard to be able to talk to others and get along, to make them understand that they like their company.

Helping is not the best way to get people to be nice to others. But it seems to be better than not getting along with people. It's just difficult for most people to get others to be pleasant and nice in any other way.

Love

Love is something that everybody needs more of. But it seems to be pretty hard for most people to find somebody who is nice and pleasant, and who they can get along with.

Most people seem to believe that marriage is difficult. They usually find that their husbands or wives don't spend too much time with them. Sometimes they don't even enjoy their company. That apparently doesn't make the other person feel very good. They might even think that it isn't worth it to get together like that, and then be disliked by somebody they were nice to.

Then they might find somebody else who likes their company and is pleased with them. But they seem to be rather concerned that it may not work out either. Then they expect that they might be disappointed again.

Being Good at Things

One thing that appears to bother most people is that--they may not

be too good at the things they try to do. When they were growing up, they might not have been one of the better players on the team--baseball, football, or any other kind. Maybe they weren't all that good when it came to sports, and it made them somewhat disappointed when others were asked first. But they probably let them play anyway because they didn't like them to feel uneasy or disappointed.

Many people seem to think that others usually did better than they did, like they weren't the best in the things they tried out. That might make them think that they weren't doing well enough. But it seems like they have to think that they can do well at something or else they ought to quit trying. It seems like most people don't remember those times too much because they were old disappointments.

Being Rejected by People

It seems that most people become disappointed when others don't want to do things with them. Not too long ago, some friends of this person's went to a party and didn't ask him if he would like to go with them. He heard them say that he wasn't usually the life of the party. So they were more interested in going there by themselves. That appeared to make him uncomfortable--disappointed and concerned. Even his friends seemed to be somewhat "cool" toward him.

If his best friends acted that way, it may mean that some things he does must not be very good. Maybe the things he thinks about are not always right. He seems to think that it's hard to find people who agree with him.

Feeling Guilty

Some people seem to feel responsible for the things they do ever since they're little kids. But other people seem to only do things in order to get the things they want. Maybe they're not concerned about other people, or what they want or need. But some people can't seem to do that sort of thing. Anytime they do something without telling the other person, they seem to get concerned about it. Sometimes they do things that are only in their best interest; then they get worried and wonder how they could have made such an error.

At times they seem to get disappointed and sad. They might feel that they can't be the kind of person they would want to be. They appear to want to be fair to other people. But no matter how much they try, they seem to do things that they dislike sometimes; not the best things they could do.

The Future

It seems that the future worries most people--like they might not know what'll happen. Even though they can usually handle things that come up, they seem to be bothered by what will happen next because they might not know how to react.

Anything could happen--their friends could get sick; they might not feel well, or have trouble with their car; they could have problems with their job. They seem to be bothered about what they would do. What if they thought that they might not be able to handle it? They might just give up. They might be unsure about it, and no one could give them help with it. That's the thing that seems to bother most people--being unsure of things and being disorganized.

APPENDIX E

DESCRIPTION OF CONSTRUCTION OF DISCLOSURE CONDITIONS

Manipulation of the interpersonal relationship with the S was effected by E's disclosure of his feelings and experiences regarding several emotion-laden topics in either (a) a personal and intimate or (b) an impersonal and superficial manner, which S was to model subsequently. The disclosure topics,[1] in order of presentation, were depending on people, getting angry at people, helping other people, love, being good at things, being rejected by people, feeling guilty, and the future. These statements were narratives ranging from 125 to 200 words. Criteria for construction of both personal and impersonal disclosures were suggested by a study by Doster and Strickland (1971). For each topic, the personal disclosure stimuli were phrased so as to reflect intimate feelings and attitudes about the experience in question, including (a) a detailed account of the experience and (b) E's thoughts and feelings about it as he experienced it. Self-references (e.g., I, me, mine) occurred frequently in the

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[1] Complete transcripts of all personal and impersonal disclosure stimuli are available from the author on request.

personal disclosure statements. In contrast, impersonal disclosure excluded personal reactions and feelings about the experience, but were marked by detached generalizations about the event, focusing on external judgments rather than E's inner evaluations. Self-references were totally absent, but references to general opinion (e.g., "It would seem that . . .") were greatly emphasized. While statements in the personal disclosure condition differed markedly from impersonal disclosures, content areas, including specific events, were matched identically across conditions. Statements were also matched for length (both by number of words and presentation time).

A sample of judges was used to aid in the construction of the personal and impersonal statements. These were 10 senior psychology majors and graduate students. They rated pairs of parallel sentences or clauses (one from each condition) as to the degree of difference between them in expression of feeling. The judges were instructed to consider each pair and to indicate which expressed more feeling and how much difference there was in expressed feeling. Each member of a pair was the direct parallel of the same statement in the opposite condition, referring to the same happening. The degree of difference in expression was rated on a 5-point scale, ranging from "no difference in degree of feelings expressed" (1 point) to "extreme difference in degree of feelings expressed" (5 points). The task included 102 pairs of sentences from the preliminary versions of the eight topics. The final completed narratives

consisted of those pairs of statements which could be reasonably differentiated by 80% of the judges. Ratings of 3, 4, or 5 were considered as reflecting reasonable differentiation. If only 4- and 5-point ratings are considered, the sentences in the final forms of the disclosure statements were so discriminated by at least 50% of the judges, and most often by 60%-70%.

Ratings of individual sentences thus provided a check on the validity of the manipulation of disclosure conditions. On the basis of the ratings, as well as the structural differences of the statements (e.g., presence or absence of self-references, which were not considered in the ratings by judges), it can be reasonably assumed that the pairs of disclosures between conditions differed considerably in degree of intimacy and expression of feeling. A dimension which was not varied was positive versus negative affect. Statements for all topics in both conditions reflected emotional experiences which resulted in unhappiness. This approach was followed because a comparison of positive and negative emotional experiences was outside the scope of this study and because negative emotional experiences were considered to be more salient and threatening to emotionally disturbed individuals. (Shimkunas, 1972, p. 194)

APPENDIX F

RATING MANUAL FOR INTERVIEW RESPONSES TO PERSONAL AND IMPERSONAL EXPERIMENTER DISCLOSURES

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January, 1972

(Revised by Pierre L.-J. Ritchie, September, 1974)

Rationale

This rating manual was developed to provide a scoring system for a number of interview response dimensions, namely, personal disclosure, avoidance (of the topic), suspiciousness, delusional thinking, and autism. These dimensions served as dependent variables in a study on interpersonal communication and cognitive deficit in schizophrenia (Shimkunas, 1972), for which this manual was developed. The personal disclosure rating and some of the instructions to raters were adopted from a manual for rating personal vs superficial disclosure for another study (Doster & Strickland, 1971). All other rating scales were developed for use in the present research (i. e., Shimkunas, 1972).

Training Raters

The nature of this manual and some of the rating dimensions requires raters to possess a fairly sophisticated level of expertise in clinical psychology and psychopathology. A reasonable amount of experience with psychiatric patients is prerequisite. Raters used in the present study (Shimkunas, 1972) were advanced graduate students in clinical psychology with at least one year of close contact and experience with patients in a state psychiatric hospital.

Preceding rating of responses, a training session was held during which this writer and two other raters rated all responses for all topics of two sample patients. Problems relating to definitions of points on the various rating scales were then worked out. This procedure resulted in high inter-rater reliability (cf., Shimkunas, 1972).

Instructions

1. Since the responses you will be rating are tape-recorded, you may find it helpful to keep ongoing ratings of subjects' disclosure. This will help you to make your rating on the overall response.

2. Rating of responses requires careful judgment and attention. Rate only what is said or directly implied.

3. Try to be as objective as possible; do not let your personal reactions sway your judgment.

4. Length of response should have no effect on your rating. Evaluate what is said during the entire response and rate it accordingly.

5. For rating purposes, individual rating dimensions are assumed to be uncorrelated. Thus, a subject can theoretically obtain high ratings (or low ratings) on two or more dimensions (e.g., it is possible to rate high on both personal disclosure and autism).

Rating Scales

Familiarize yourself with the detailed descriptions of each point of each rating scale. When you are doing your ratings, you may use the underlined phrases and catch-words within each point on the scales to help you pinpoint your ratings.

Personal Disclosure

0. Absence of personal involvement; superficial evaluation of the topic. Focuses on people, objects or events not including himself. Self reference statements (e.g., I, me) totally lacking.

1. Almost entirely impersonal approach to topic. May infrequently bring self into discussion (e.g., It seems to me . . . , etc.) but central focus is on people, objects or events other than own experiences. May express how he thinks or perceives external events, but there is no indication of his interaction with them.

2. More involved with aspects of self but tendency to deal superficially is clearly predominant. Attempts to reveal information about self by accepting experiences as his own, rather than as an outside observer. While he gives evidence of owning his attitudes, there is extremely limited and superficial exploration of experiences and their implications for him.

3. Equal attention to superficial and personal aspects of topic. Clearly places himself in the context of his experiences but information about self is more oriented toward description rather than exploration of self. Feelings are labeled but not explored.

4. Deals with topic mostly on a personal level. Places self in context of experiences and his expression allows for good understanding of his frame of reference and feelings. Elaborates on feelings and attitudes beyond mere labelling. Mentions their antecedents or consequences. However, thoughts and feelings about experiences are still somewhat unclear.

5. Deals with topic almost entirely on a personal level. Thoughts and feelings are well explored in the context of his experiences so that it is easy to understand his frame of reference. Fairly easy to understand his inner feelings, but these are not fully integrated with external experiences.

6. Focuses entirely on himself in a very intimate and searching manner. Thoughts and feelings are well explored in the context of external and inner experiences. He is able to express information about himself at a "gut" level so that the observer truly understands where this person stands in terms of his feelings and cognitions regarding the topic.

Avoidance

0. The person has focused directly and totally on the topic. He has not strayed at all from it and has considered it and all its implications without pursuing even reasonably related issues. His consideration of the topic was complete and comprehensive.

1. Deals extensively with the topic. This person is not evading the issue; he has evaluated it and considered it in terms of closely related aspects. He has integrated these so that the topic has become fairly broad, perhaps reflecting a minor unwillingness to fully confront the central issue.

2. Deals with the topic for the most part. Has evaluated it and various

closely related aspects. However, still a strong tendency to get side-tracked into discussing aspects of the stimulus other than the central issue.

3. Communication equally reflects willingness or ability to deal with topic and reticence to approach it. S is ambivalent about confronting the topic and is vacillating between the central aspects of the topic and peripheral issues perhaps by some distancing or denying the topic's relevance to him/her.

4. More evidence of recognition of the topic as the central issue under consideration, but attempting to evade it by focusing on peripheral aspects. It is clear that avoidance of topic is stronger than approach toward it.

5. Practically evades topic completely, but does at least mention it in a cursory manner. Vaguely discusses aspects of it. It is clear from his statements and expressions that he is not interested in expressing himself on this topic and does so minimally, and only because of the social constraints of the interview situation.

6. Fails to deal with topic either by total refusal to comment, by obviously changing the subject, forgetting the topic, or dismissing it, and discussing some other aspect of the stimulus disclosure.

Suspiciousness

0. Was completely trusting and at ease with the interviewer. He was friendly and eager to discuss the topic. He did not hold back at all; there was no evidence of guardedness. He felt free to engage in the interview without reticence or reservation.

1. Almost completely trusting of the interview and interviewer. He was quite willing to proceed with it and to do his best to respond to the topics. He may have casually asked about the purpose of the interview, and what it had to do with his treatment at the hospital. Very occasionally, it appeared that he was holding back some comment or piece of information.

2. No problem in being able to respond to the topics. He seemed fairly friendly and reasonably eager to cooperate. However, he tended to become somewhat sensitive when faced with a particular topic that may have been threatening. Showed some reluctance to deal with topics because he was unsure of the interviewer's intentions.

3. Willing to cooperate but somewhat cautious about the circumstance of the interview. Once reassured, he had little difficulty in discussing topics. However, needed such reassurance several times during the session. Was somewhat sensitive to the idea that some topics referred to him a little too personally, however, he denied this by his demeanor.

4. Had to be talked into cooperating at almost every juncture. May have often asked about the reason for the interview and questioned its relevance to his stay at the hospital. After first part of each topic, however, his guardedness may have diminished, but was still generally guarded throughout.

5. Quite suspicious and guarded, continually making comments which questioned the meaning or intent of the interview, what would be done with the data, or why certain topics were being discussed. Long lapses in responses may have been noted, stemming from his guardedness. May have been some references to the possibility that the interviewer had ill intentions toward S, or that the interview or hospital treatment is part of a plot against him. He may have looked around the room, asking about various things in it in a suspicious manner. Showed marked hostility.

6. Extremely hostile and/or suspicious to the extent that most responses were interspersed with questions regarding the intent of the interview, etc. Almost refused to cooperate in the interview because of his extreme suspiciousness. Often noted to be mute in response to experiment's requirements. Constantly questioned what was being done to him; made numerous hostile, negativistic, or belligerent remarks.

Delusional Thinking

0. Showed no evidence of delusions or peculiar beliefs. Feelings--no hostility toward others; no questioning of their behavior toward him. No indication of paranoid ideation.

1. Belief system strongly reality oriented. Delusions and paranoid ideation absent. Some slight hostility toward others and dissatisfaction with their behavior was evident. Slightly "sensitive" about how others treat him.

2. Tendency to be sensitive about the "real" intention of others. Sometimes indicates that others may be particularly unfair to him. Still no tangible paranoid projection.

3. Recurring evidence of general concern about the behavior of others toward him. Generally feels hostile toward them. Has vague feelings that other people don't treat him fairly--he always gets put down by others, he thinks he gets singled out for bad treatment.

4. Wonders about possibility of plot to do him harm. Has feelings of hostility toward people whom he sees as consistently out to get him. Thinks somebody or something may be controlling him. May also feel that he is a very important person, and that is why these things are happening.

5. Very paranoid and hostile. There is definitely a plot against him, and he can elaborate it in detail. It is clear that such a plot exists. Considers others his enemy. Other people intend to do him harm or control his behavior.

6. Extreme, massive delusions. Delusions almost totally fill his experience. Constantly talks about plots against him, efforts to control him by means of Xrays, TV sets, etc. May believe he is Jesus Christ or other important figure. Constant expression of delusions and hostility.

Autism

0. Showed no evidence of peculiar or illogical thinking. All his statements were objective and public; his ideas were all consensually valid and verifiable. There was no difficulty at all in making sense out of his ideas as he expressed them. He was totally lucid and clear. His logic was air-tight.

1. Little, if any, evidence of illogical thought. Ideas were objective and public, easily validated in terms of his reference group. Made sense most of the time, with only brief instances of "fuzzy" thinking. Generally quite lucid.

2. Can follow his reasoning without much difficulty. He generally made sense although an occasional peculiar idea may have emerged. This was most often evidenced in a thought, or thought sequence, that was not clear to the rater; it is unclear as to how the idea was integrated into overall thought sequence. Thinking was not, however, so much peculiar and idiosyncratic, as it was muddled and less logical.

3. Logic can generally be understood. However, peculiar concepts entered into his verbal repertoire. These were, however, isolated incidents. Generally, concepts were public and reasonably well stated, although some difficulty may be encountered due to some "fuzzy" and/or tangential ideas.

4. *Sloppy thought processes* definitely overrode clarity of concepts. Conclusions were *frequently illogical*, although not to the extent that some appreciation for their outcome was impossible. *Several peculiar associations* cropped up--clang associations, slightly autistic concepts, tangential ideas. However, overall thought sequence was still intact.

5. This person is largely *living in an autistic environment*, expressing *concepts which are mostly private* and difficult to validate consensually. Numerous clang and other peculiar associations arose and were so frequent that a number of thought sequences were impossible to understand or no verbal response at all was made. Logic was often fuzzy if it resembled normal logic at all. *Statements* were very *frequently inappropriate* to the situation.

6. *Almost every statement* this person made was *peculiar and autistic.* He made *no sense in his communication*, considering the topic under discussion. He used *private symbols and concepts*, often related together in a highly autistic and tangential manner. Logic was clearly lacking.

APPENDIX G

INTERVIEW RESPONSE RATING FORM

Subject: Rater:

Depending on People	Personal Disclosures:	0	1	2	3	4	5	6
	Avoidance:	0	1	2	3	4	5	6
	Suspiciousness:	0	1	2	3	4	5	6
	Delusional Thinking:	0	1	2	3	4	5	6
	Autism:	0	1	2	3	4	5	6
Getting Angry at People	Personal Disclosures:	0	1	2	3	4	5	6
	Avoidance:	0	1	2	3	4	5	6
	Suspiciousness:	0	1	2	3	4	5	6
	Delusional Thinking:	0	1	2	3	4	5	6
	Autism:	0	1	2	3	4	5	6
Helping Other People	Personal Disclosures:	0	1	2	3	4	5	6
	Avoidance:	0	1	2	3	4	5	6
	Suspiciousness:	0	1	2	3	4	5	6
	Delusional Thinking:	0	1	2	3	4	5	6
	Autism:	0	1	2	3	4	5	6
Love	Personal Disclosures:	0	1	2	3	4	5	6
	Avoidance:	0	1	2	3	4	5	6
	Suspiciousness:	0	1	2	3	4	5	6
	Delusional Thinking:	0	1	2	3	4	5	6
	Autism:	0	1	2	3	4	5	6
Being Good at Things	Personal Disclosures:	0	1	2	3	4	5	6
	Avoidance:	0	1	2	3	4	5	6
	Suspiciousness:	0	1	2	3	4	5	6
	Delusional Thinking:	0	1	2	3	4	5	6
	Autism:	0	1	2	3	4	5	6
Being Rejected by People	Personal Disclosures:	0	1	2	3	4	5	6
	Avoidance:	0	1	2	3	4	5	6
	Suspiciousness:	0	1	2	3	4	5	6
	Delusional Thinking:	0	1	2	3	4	5	6
	Autism:	0	1	2	3	4	5	6
Feeling Guilty	Personal Disclosures:	0	1	2	3	4	5	6
	Avoidance:	0	1	2	3	4	5	6
	Suspiciousness:	0	1	2	3	4	5	6
	Delusional Thinking:	0	1	2	3	4	5	6
	Autism:	0	1	2	3	4	5	6
The Future	Personal Disclosures:	0	1	2	3	4	5	6
	Avoidance:	0	1	2	3	4	5	6
	Suspiciousness:	0	1	2	3	4	5	6
	Delusional Thinking:	0	1	2	3	4	5	6
	Autism:	0	1	2	3	4	5	6

APPENDIX H

SUPPLEMENTARY DATA

Table 61

ANOVA Summary--Diagnosis within Personal Demand - No Goal Condition--Age

Source	df	SS	MS	F	p
Between groups	2	4.093	2.046	< 1	n. s.
Within groups	21	3199.750	152.369		
Total	23	3203.843			

Table 62

ANOVA Summary--Diagnosis within Personal Demand - Open Ward Condition--Age

Source	df	SS	MS	F	p
Between groups	2	85.750	42.875	< 1	n. s.
Within groups	21	2893.875	137.803		
Total	23	2979.625			

Table 63

ANOVA Summary--Diagnosis within Personal Demand - Discharge Condition--Age

Source	df	SS	MS	F	p
Between groups	2	12.250	6.125	< 1	n. s.
Within groups	21	1432.250	68.202		
Total	23	1444.500			

Table 64

ANOVA Summary--Diagnosis within Impersonal Demand - No Goal Condition--Age

Source	df	SS	MS	F	p
Between groups	2	354.250	177.125	1.592	n. s.
Within groups	21	2336.375	111.256		
Total	23	2690.625			

Table 65

ANOVA Summary--Goal - Demand Conditions within Paranoid Schizophrenic Diagnosis--Age

Source	df	SS	MS	F	p
Between groups	3	70.093	23.364	< 1	n. s.
Within groups	28	3478.375	124.227		
Total	31	3548.468			

Table 66

ANOVA Summary--Goal - Demand Conditions within Nonparanoid Schizophrenic Diagnosis--Age

Source	df	SS	MS	F	p
Between groups	3	151.750	50.583	< 1	n. s.
Within groups	28	2525.750	90.205		
Total	31	2677.500			

Table 67

ANOVA Summary--Goal - Demand Conditions within Nonpsychotic Diagnosis--Age

Source	df	SS	MS	F	p
Between groups	3	72.093	24.031	< 1	n. s.
Within groups	28	3858.125	137.790		
Total	31	3930.218			

Table 68

ANOVA Summary--Diagnosis within Personal Demand - No Goal Condition--Education

Source	df	SS	MS	F	p
Between groups	2	17.333	8.666	1.277	n.s.
Within groups	21	142.500	6.785		
Total	23	159.833			

Table 69

ANOVA Summary--Diagnosis within Personal Demand - Open Ward Condition--Education

Source	df	SS	MS	F	p
Between groups	2	3.250	1.625	< 1	n.s.
Within groups	21	197.375	9.398		
Total	23	200.625			

Table 70

ANOVA Summary--Diagnosis within Personal Demand - Discharge Condition--Education

Source	df	SS	MS	F	p
Between groups	2	21.583	10.791	1.209	n.s.
Within groups	21	187.375	8.922		
Total	23	208.958			

Table 71

ANOVA Summary--Diagnosis within Impersonal Demand - No Goal Condition--Education

Source	df	SS	MS	F	p
Between groups	2	9.333	4.666	< 1	n. s.
Within groups	21	98.500	4.690		
Total	23	107.833			

Table 72

ANOVA Summary--Goal - Demand Conditions within Paranoid Schizophrenic Diagnosis--Education

Source	df	SS	MS	F	p
Between groups	3	4.843	1.614	< 1	n. s.
Within groups	28	138.375	4.942		
Total	31	143.218			

Table 73

ANOVA Summary--Goal - Demand Condition within Nonparanoid Schizophrenic Diagnosis--Education

Source	df	SS	MS	F	p
Between groups	3	24.500	8.166	1.556	n. s.
Within groups	28	147.000	5.250		
Total	31	171.500			

Table 74

ANOVA Summary--Goal - Demand Conditions within Nonpsychotic Diagnosis--Education

Source	df	SS	MS	F	p
Between groups	3	14.093	4.697	< 1	n. s.
Within groups	28	340.375	12.156		
Total	31	354.468			

Table 75

ANOVA Summary--Diagnosis within Personal Demand - No Goal Condition--Number of Hospitalizations

Source	df	SS	MS	F	p
Between groups	2	27.083	13.541	2.296	n. s.
Within groups	21	123.875	5.898		
Total	23	150.958			

Table 76

ANOVA Summary--Diagnosis within Personal Demand - Open Ward Condition--Number of Hospitalizations

Source	df	SS	MS	F	p
Between groups	2	65.583	32.791	2.595	n. s. (< .10)
Within groups	21	265.375	12.636		
Total	23	330.958			

Table 77

ANOVA Summary--Diagnosis within Personal Demand - Discharge Condition--Number of Hospitalizations

Source	df	SS	MS	F	p
Between groups	2	14.583	7.291	1.640	n. s.
Within groups	21	93.375	4.446		
Total	23	107.958			

Table 78

ANOVA Summary--Diagnosis withim Impersonal Demand - No Goal Condition--Number of Hospitalizations

Source	df	SS	MS	F	p
Between groups	2	7.750	3.875	2.919	n. s. (< .10)
Within groups	21	27.875	1.327		
Total	23	35.625			

Table 79

ANOVA Summary--Goal - Demand Conditions within Paranoid Schizophrenic Diagnosis--Number of Hospitalizations

Source	df	SS	MS	F	p
Between groups	3	34.843	11.614	2.367	n. s. (< .10)
Within groups	28	137.375	4.906		
Total	31	172.218			

Table 80

ANOVA Summary--Goal - Demand Conditions within Nonparanoid Schizophrenic Diagnosis--Number of Hospitalizations

Source	df	SS	MS	F	p
Between groups	3	37.750	12.583	1.189	n. s.
Within groups	28	296.250	10.580		
Total	31	334.000			

Table 81

ANOVA Summary--Goal - Demand Conditions within Nonpsychotic Diagnosis--Number of Hospitalizations

Source	df	SS	MS	F	p
Between groups	3	2.593	0.864	< 1	n. s.
Within groups	28	76.875	2.745		
Total	31	79.468			

Table 82

ANOVA Summary--Diagnosis within Personal Demand - No Goal Condition--Months since First Hospitalization

Source	df	SS	MS	F	p
Between groups	2	17327.093	8663.546	2.247	n. s.
Within groups	21	80954.875	3854.993		
Total	23	98281.937			

Table 83

ANOVA Summary--Diagnosis within Personal Demand - Open Ward Condition--Months since First Hospitalization

Source	df	SS	MS	F	p
Between groups	2	9754.339	4877.168	2.394	n. s.
Within groups	21	42777.500	2037.023		
Total	23	52531.839			

Table 84

ANOVA Summary--Diagnosis within Personal Demand - Discharge Condition--Months since First Hospitalization

Source	df	SS	MS	F	p
Between groups	2	2286.335	1143.168	1.079	n. s.
Within groups	21	22241.625	1059.125		
Total	23	24527.960			

Table 85

ANOVA Summary--Diagnosis within Impersonal Demand - No Goal Condition--Months since First Hospitalization

Source	df	SS	MS	F	p
Between groups	2	3473.589	1736.794	< 1	n. s.
Within groups	21	61295.750	2918.845		
Total	23	64769.339			

Table 86

ANOVA Summary--Goal - Demand Conditions within Paranoid Schizophrenic Diagnosis--Months since First Hospitalization

Source	df	SS	MS	F	p
Between groups	3	20870.125	6956.707	2.348	n. s. (< .10)
Within groups	28	82960.750	2962.883		
Total	31	103830.875			

Table 87

ANOVA Summary--Goal - Demand Conditions within Nonparanoid Schizophrenic Diagnosis--Months since First Hospitalization

Source	df	SS	MS	F	p
Between groups	3	4174.250	1391.416	< 1	n. s.
Within groups	28	63879.250	2281.401		
Total	31	68053.500			

Table 88

ANOVA Summary--Goal - Demand Conditions within Nonpsychotic Diagnosis--Months since First Hospitalization

Source	df	SS	MS	F	p
Between groups	3	10523.125	3507.708	1.625	n. s.
Within groups	28	60429.750	2158.205		
Total	31	70952.875			

Table 89

ANOVA Summary--Diagnosis within Personal Demand - No Goal Condition--Days of Current Hospitalization

Source	df	SS	MS	F	p
Between groups	2	9.000	4.500	< 1	n. s.
Within groups	21	3819.000	181.857		
Total	23	3828.000			

Table 90

ANOVA Summary--Diagnosis within Personal Demand - Open Ward Condition--Days of Current Hospitalization

Source	df	SS	MS	F	p
Between groups	2	18.085	9.043	< 1	n. s.
Within groups	21	3592.875	171.089		
Total	23	3610.960			

Table 91

ANOVA Summary--Diagnosis within Personal Demand - Discharge Condition--Days of Current Hospitalization

Source	df	SS	MS	F	p
Between groups	2	26.339	13.169	< 1	n. s.
Within groups	21	3241.000	154.333		
Total	23	3267.339			

Table 92

ANOVA Summary--Diagnosis within Impersonal Demand - No Goal Condition--Days of Current Hospitalization

Source	df	SS	MS	F	p
Between groups	2	30.335	15.168	< 1	n. s.
Within groups	21	3652.625	173.934		
Total	23	3682.960			

Table 93

ANOVA Summary--Goal - Demand Conditions within Paranoid Schizophrenic Diagnosis--Days of Current Hospitalization

Source	df	SS	MS	F	p
Between groups	3	45.093	15.031	< 1	n. s.
Within groups	28	6293.875	224.781		
Total	31	6338.968			

Table 94

ANOVA Summary--Goal - Demand Conditions within Nonparanoid Schizophrenic Diagnosis--Days of Current Hospitalization

Source	df	SS	MS	F	p
Between groups	3	36.625	12.208	< 1	n. s.
Within groups	28	3593.250	128.330		
Total	31	3629.875			

Table 95

ANOVA Summary--Goal - Demand Conditions within Nonpsychotic Diagnosis--Days of Current Hospitalization

Source	df	SS	MS	F	p
Between groups	3	15.343	5.114	< 1	n. s.
Within groups	28	4418.375	157.799		
Total	31	4433.718			

Table 96

ANOVA Summary--Diagnosis within Personal Demand - No Goal Condition--IQ

Source	df	SS	MS	F	p
Between groups	2	218.250	109.125	< 1	n. s.
Within groups	21	9442.375	449.636		
Total	23	9660.625			

Table 97

ANOVA Summary--Diagnosis within Personal Demand - Open Ward Condition--IQ

Source	df	SS	MS	F	p
Between groups	2	307.750	153.875	< 1	n. s.
Within groups	21	4733.875	225.422		
Total	23	5041.625			

Table 98

ANOVA Summary--Diagnosis within Personal Demand - Discharge Condition--IQ

Source	df	SS	MS	F	p
Between groups	2	638.625	319.312	1.324	n. s.
Within groups	21	5065.375	241.208		
Total	23	5704.000			

Table 99

ANOVA Summary--Diagnosis within Impersonal Demand - No Goal Condition--IQ

Source	df	SS	MS	F	p
Between groups	2	520.375	260.187	1.212	n. s.
Within groups	21	4509.625	214.744		
Total	23	5030.000			

Table 100

ANOVA Summary--Goal - Demand Conditions within Paranoid Schizophrenic Diagnosis--IQ

Source	df	SS	MS	F	p
Between groups	3	1062.875	354.291	1.421	n. s.
Within groups	28	6983.375	249.406		
Total	31	8046.250			

Table 101

ANOVA Summary--Goal - Demand Conditions within Nonparanoid Schizophrenic Diagnosis--IQ

Source	df	SS	MS	F	p
Between groups	3	444.125	148.041	< 1	n. s.
Within groups	28	8653.750	309.062		
Total	31	9097.875			

Table 102

ANOVA Summary--Goal - Demand Conditions within Nonpsychotic Diagnosis--IQ

Source	df	SS	MS	F	p
Between groups	3	74.875	24.958	< 1	n. s.
Within groups	28	8114.125	289.790		
Total	31	8189.000			

Table 103

ANOVA Summary--Personal Demand - No Goal Condition--Total Response Time

Source	df	SS	MS	F	p
Between groups	2	127124.000	63562.000	< 1	n.s.
Within groups	21	5342229.000	254391.812		
Total	23	5469353.000			

Table 104

ANOVA Summary--Personal Demand - Open Ward Condition--Total Response Time

Source	df	SS	MS	F	p
Between groups	2	54992.000	27496.000	< 1	n.s.
Within groups	21	7782896.000	370614.062		
Total	23	7837888.000			

Table 105

ANOVA Summary--Personal Demand - Discharge Condition--Total Response Time

Source	df	SS	MS	F	p
Between groups	2	52575.000	26287.500	< 1	n. s.
Within groups	21	5504303.000	262109.625		
Total	23	5556878.000			

Table 106

ANOVA Summary--Impersonal Demand - No Goal Condition--
Total Response Time

Source	df	SS	MS	F	p
Between groups	2	883806.000	441903.000	1.510	n.s.
Within groups	21	6146071.000	292670.000		
Total	23	7029877.000			

Table 107

Two Factor ANOVA Summary--Personal Disclosure

Source	df	SS	MS	F	p
Diagnosis	2	179.395	89.697	1.63	n. s.
Condition	3	153.031	51.010	< 1	n. s.
Diagnosis x Condition	6	183.655	30.609	< 1	n. s.
Within Replicates	84	4616.875	54.962		
Total	95	5132.957			

Table 108

Two Factor ANOVA Summary--Avoidance

Source	df	SS	MS	F	p
Diagnosis	2	1462.270	731.135	10.56	< .001
Condition	3	54.875	18.291	< 1	n. s.
Diagnosis x Condition	6	367.241	61.206	< 1	n. s.
Within Replicates	84	5814.500	69.220		
Total	95	7698.886			

Table 109

Two Factor ANOVA Summary--Suspiciousness

Source	df	SS	MS	F	p
Diagnosis	2	236.312	118.156	2.65	n. s. (<.10)
Condition	3	27.916	9.305	< 1	n. s.
Diagnosis x Condition	6	467.521	77.920	1.75	n. s. (<.15)
Within Replicates	84	3742.250	44.550		
Total	95	4474.000			

Table 110

Two Factor ANOVA Summary--Delusional Thinking

Source	df	SS	MS	F	p
Diagnosis	2	150.520	75.260	7.47	< .005
Condition	3	92.458	30.819	3.06	< .05
Diagnosis x Condition	6	41.222	6.870	< 1	n. s.
Within Replicates	84	846.750	10.080		
Total	95	1130.951			

Table 111

Two Factor ANOVA Summary--Autism

Source	df	SS	MS	F	p
Diagnosis	2	861.520	430.760	9.99	< .001
Condition	3	29.750	9.916	< 1	n. s.
Diagnosis x Condition	6	395.752	65.958	1.53	n. s.
Within Replicates	84	3620.250	43.098		
Total	95	4907.273			

Table 112

Two Factor ANOVA Summary--Personal Disclosure Replication

Source	df	SS	MS	F	p
Diagnosis	2	59.375	29.687	< 1	n. s.
Condition	1	114.083	114.083	1.76	n. s.
Diagnosis x Condition	2	14.541	7.270	< 1	n. s.
Within Replicates	42	2721.250	64.791		
Total	47	2909.250			

Table 113

Two Factor ANOVA Summary--Avoidance Replication

Source	df	SS	MS	F	p
Diagnosis	2	1170.666	585.333	7.67	< .001
Condition	1	18.750	18.750	< 1	n. s.
Diagnosis x Condition	2	55.489	27.744	< 1	n. s.
Within Replicates	42	3205.000	76.309		
Total	47	4449.906			

Table 114

Two Factor ANOVA Summary--Suspiciousness Replication

Source	df	SS	MS	F	p
Diagnosis	2	138.500	69.250	1.35	n. s.
Condition	1	0.333	0.333	< 1	n. s.
Diagnosis x Condition	2	221.166	110.583	2.16	n. s.
Within Replicates	42	2147.250	51.125		
Total	47	2507.250			

Table 115

Two Factor ANOVA Summary--Delusional Thinking Replication

Source	df	SS	MS	F	p
Diagnosis	2	126.541	63.270	5.69	< .01
Condition	1	21.333	21.333	1.92	n. s.
Diagnosis x Condition	2	5.039	2.519	< 1	n. s.
Within Replicates	42	467.000	11.119		
Total	47	619.914			

Table 116

Two Factor ANOVA Summary--Autism Replication

Source	df	SS	MS	F	p
Diagnosis	2	748.791	374.395	7.28	.005
Condition	1	18.750	18.749	< 1	n. s.
Diagnosis x Condition	2	123.871	61.935	1.20	n. s.
Within Replicates	42	2160.250	51.434		
Total	47	3051.662			

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